

605-2B

DEPARTMENT OF THE NAVY  
RESIDENT OFFICER IN CHARGE OF CONSTRUCTION  
NAVAL REGIONAL MEDICAL CENTER  
FIELD OFFICE  
CAMP LEJEUNE, NC 28542

TELEPHONE NO.  
919-353-3455

IN REPLY REFER TO:  
RJD:jj  
N62470-77-C-7526

NOV 06 1981

Cardinal Contracting Co., Inc.  
Post Office Box 8408  
Camp Lejeune, North Carolina 28542

RE: Contract N62470-77-C-7526, 205 Bed  
Hospital, Naval Regional Medical  
Center, Camp Lejeune, North Carolina

SUBJ: Section 11744; D-4000 Dental Air  
Compressor, Submittal No s 605-2B,  
and 606-2B

Gentlemen:

This letter provides clarification and expansion of the "as noted" comments on the subject submittal as addressed to the refrigerated air dryer.

The review notes: "Dryer has been wired as part of compressor (480V, 30) on drawings. This will have to be changed for 110V." This note results from the Erwin-Jones submittal of a two (2) package compressor/dryer unit requiring two (2) different power sources in lieu of a single package unit requiring a single power source (see 11744-3.8.1). The Erwin-Jones submittal requires that a separate 110V power source be provided for the dryer. This second power source may be obtained through a step-down transformer from the existing 480V source or by running a separate 110V circuit from Panel BER1, Circuit 24. The above wiring requirements are created by the equipment submitted and are to be at no cost to the Government.

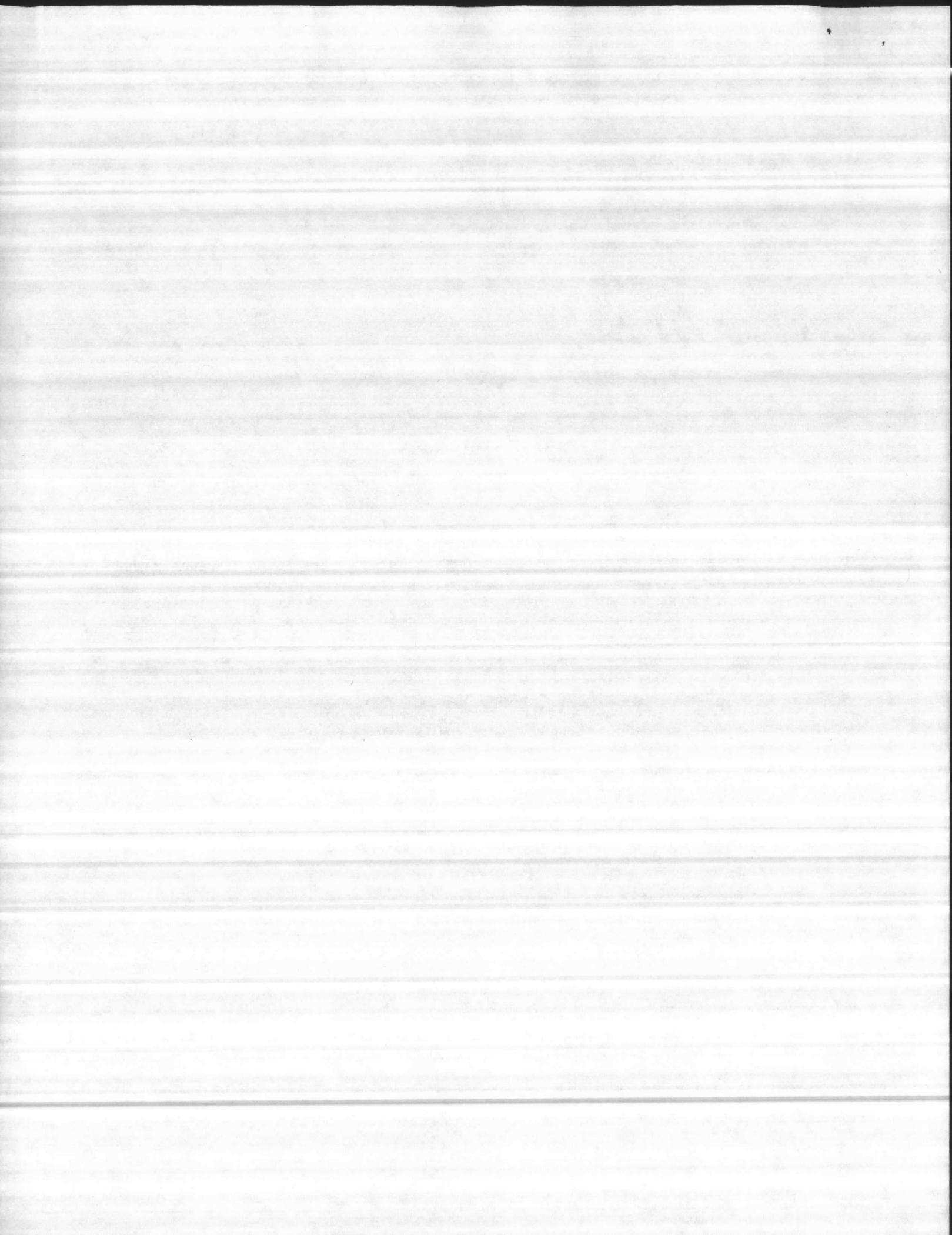
Furthermore, it is required that data be submitted on the ZEKS, Model 3, Refrigerated Air Dryer which addresses the requirement of specification 11744-8.18. The submittal "as noted" does not sufficiently describe the air dryer.

Sincerely,

R. J. DEGON  
LCDR, CEC, USN  
Deputy

Copy to:

LANTDIV (Code 05)  
Lockwood-Greene  
Gen. Corr.  
→ Submittal  
Reading  
Andy



DRAWING AND SPECIFICATION TRANSMITTAL  
 LOCKWOOD GREENE ENGINEERS, INC.

SPARTANBURG, SOUTH CAROLINA 29304  
 P.O. BOX 491 (803) 592-2351

*Let 1174*  
 #605-2B  
 606-2B

*file*  
 12/15/81

TO Naval Facilities  
 Engineering Command-Bldg. N26  
 Atlantic Division  
 Norfolk, Va. 23511

DATE 10/21/81  
 JOB NO. 77239.16  
 JOB NAME N.R.M.C.

TRANSMITTAL NO. 5058  
 SHEET 1 OF 1  
 ORDER NO.

ATTN: Mr. John Grubbs - Code 5

Cont. # N-62470-77-C-7526

WE ARE SENDING YOU THE FOLLOWING DATA XX HEREWITH          UNDER SEPARATE COVER

QUAN.	DOCUMENT NO.	REV. NO.	DESCRIPTION	VENDOR	CODE
1 1			P-4000 Dental Air Compressor Refrigerated Air Dryer Model #3	Ingersoll-Rand Zeks	AN AN

	FOR	INIT	DATE
RDC		<i>hpc</i>	10-23
RJD		<i>D</i>	10/26
JR		<i>R</i>	10-26
AY		<i>y</i>	11/02
JJ			

CODE FOR

LOCKWOOD GREENE DOCUMENTS

- A - INFORMATION
- B - REVIEW
- C - APPROVAL
- D - REVISED DWG. (SEE REVISION)

- E - BID
- F - CONSTRUCTION
- G - PURCHASING
- H -

VENDOR DOCUMENTS

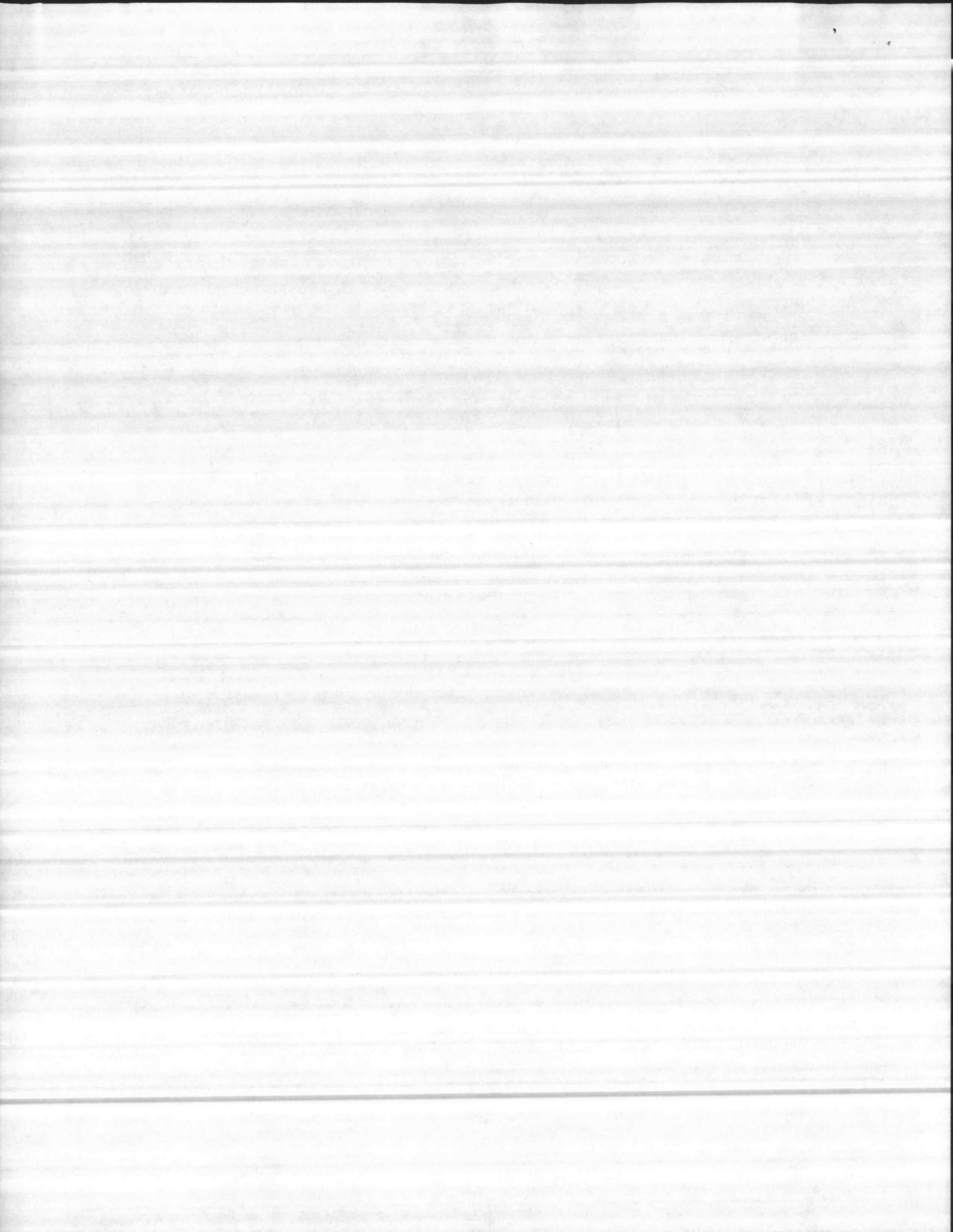
- K - NO CORRECTIONS NOTED
- L - MAKE CORRECTIONS NOTED
- M - REVISE AND RESUBMIT
- N - REJECTED (SEE REMARKS)

COPIES TO	QUAN	TRANS ONLY	CODE	COPIES TO		
				QUAN	TRANS ONLY	CODE
ROICC	2					
Cardinal Contracting	3					



REMARKS

PLEASE ACKNOWLEDGE RECEIPT BY IMMEDIATE RETURN OF SIGNED COPY OF THIS TRANSMITTAL  
 RECEIVED BY \_\_\_\_\_ DATE \_\_\_\_\_ TRANSMITTED BY Richard McKnight



SECTION 11744

CONTRACTOR'S SUBMITTAL TRANSMITTAL

5ND LANTDIV 4-4355/3 (Rev. 6/76)

CONTRACT NO. N-62470-77-C-7520 TRANSMITTAL NO. 605-2B DATE 10-5-81

FROM CONTRACTOR Cardinal Contr. Co.  
TO Lockwood Greene Eng'rs.

PROJECT TITLE AND LOCATION NAVAL REGIONAL MED. CTR.  
Camp Lejeune, N.C.

CONTRACTOR USE ONLY

REVIEWER USE ONLY

\*List only one specification division per form.

\*\*ACTION CODES

List only one of the following categories on each transmittal form, and indicate which is being submitted

- A-Approved
- D-Disapproved
- AN-Approved as noted
- RA-Receipt acknowledged.
- C-Comments
- R-Resubmit

- Contractor Approved
- OICC Approval
- Deviation/Substitution For OICC Approval

ITEM NO.	PROJ. SPEC. SECT. & PARA. and/or PROJ. DWG. NO. *	ITEM IDENTIFICATION (Type, size, model no., Mfg. name, dwg. or brochure number)	NO. OF COPIES	ACTION CODES **	REVIEWER'S INITIALS CODE AND DATE
		D-4000 Dental Air Compressor			
		Model 2-5T2 NLE5-by INGERSOLL-RAND	7	AN	
		ZEKS Refrigerated Air Dryer-Model #3.	7	AN	

CONTRACTOR'S COMMENTS

COPY OF TRANSMITTAL AND SUBMITTALS TO ROICC

CONTRACTOR REPRESENTATIVE (Signature)

10-5-81

Wm. J. Haymaker

DATE RECEIVED BY REVIEWER

FROM (Reviewer)

TO

- Submittals are returned with action indicated. Approval of an item does not include approval of any deviation from the contract requirements unless the contractor calls attention to and supports the deviation.
- Submittals are forwarded to LANTDIV with A-E recommendations indicated in REVIEWER USE ONLY Section and in comments below on ONE COPY of the transmittal form.

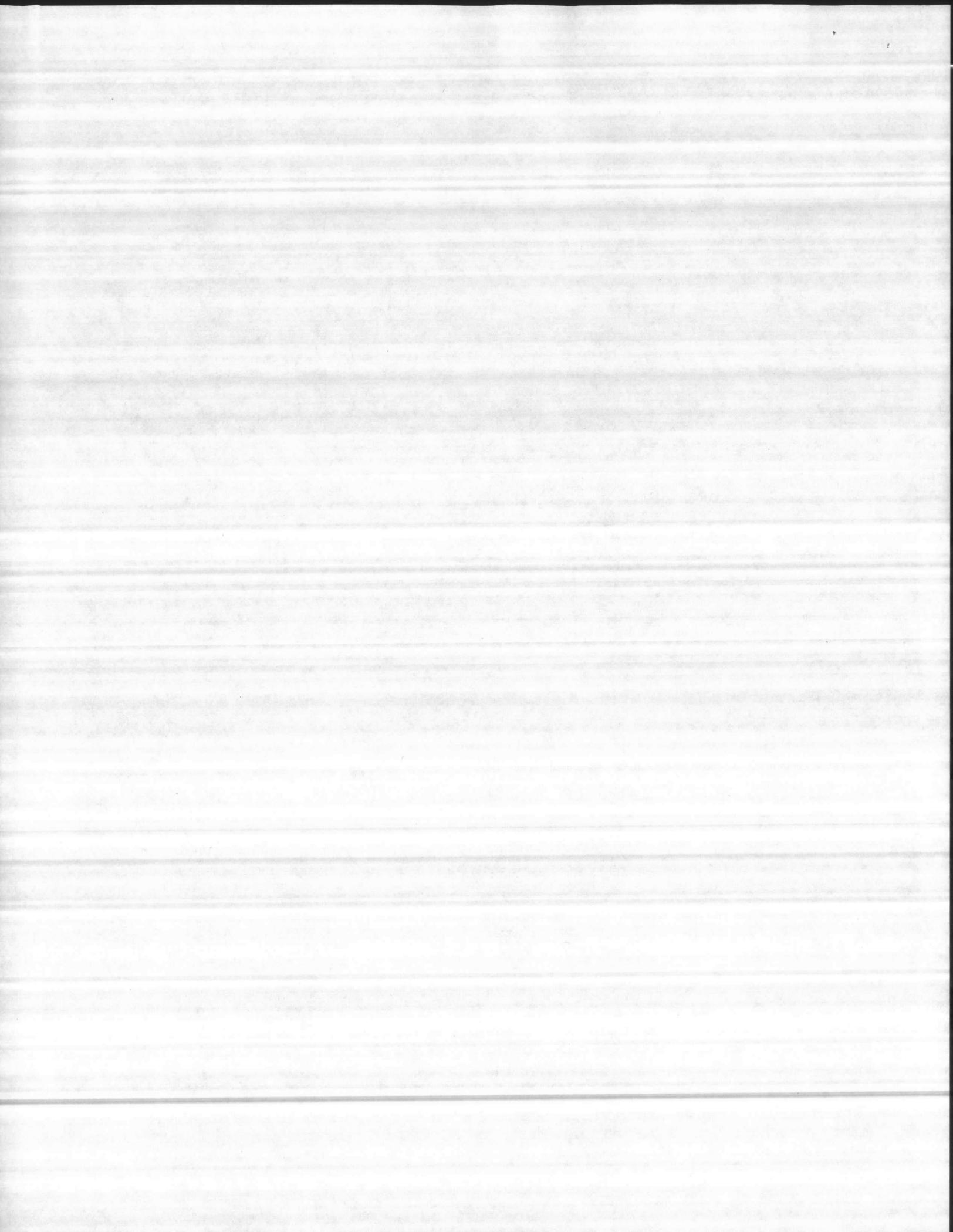
REVIEWER'S COMMENTS

COPIES TO: ROICC (2) LANTDIV (1) A-E (1)

DATE

SIGNATURE

5058



10-6-81

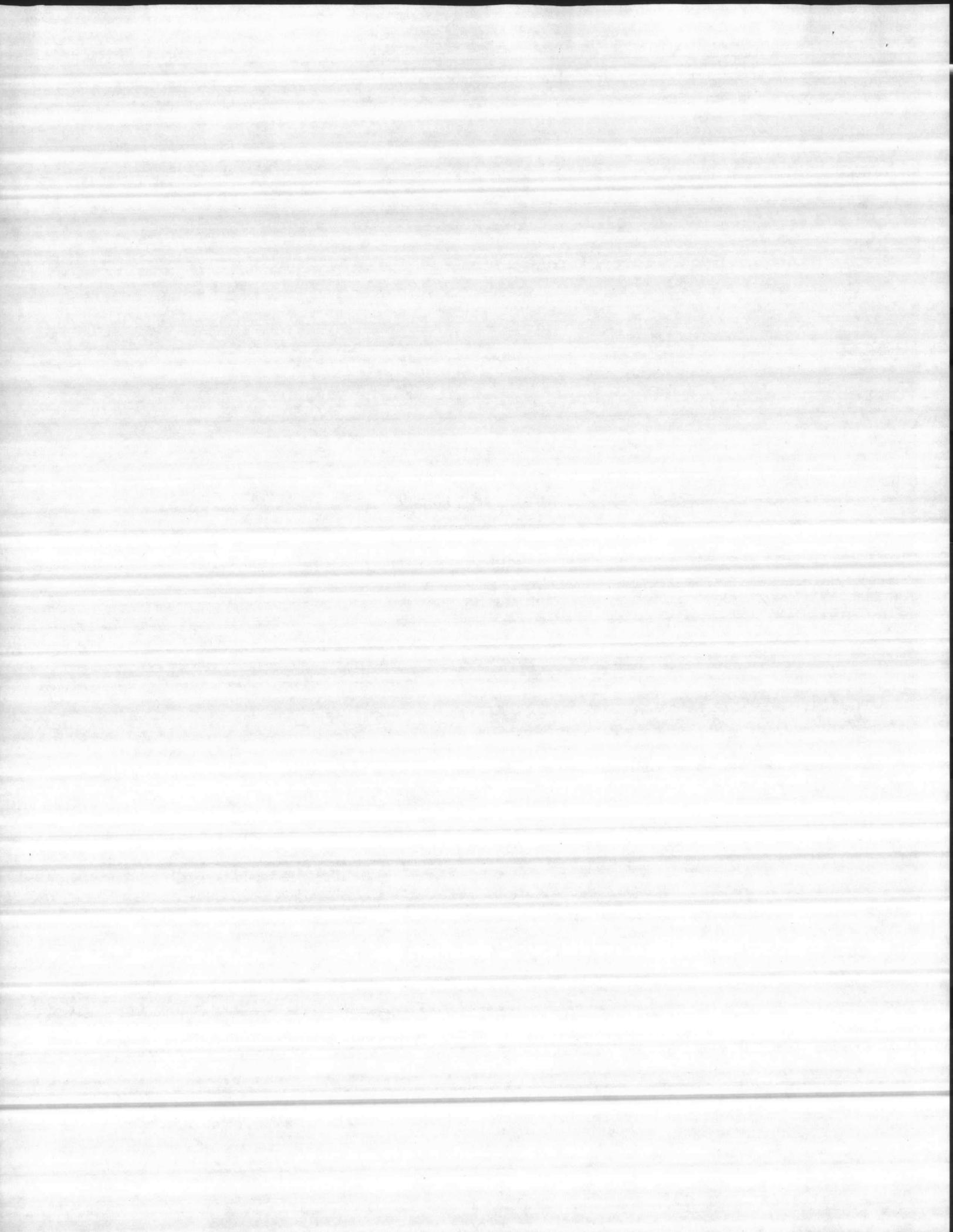
RD

Called Joe Garrett about  
this. Compressor is not oil-free  
type. No electrical drawings.  
Poor quality submittal. They  
will look at closely.

RD

okey

RD



SECTION 11744

CONTRACTOR'S SUBMITTAL TRANSMITTAL

5ND LANTDIV 4-4355/3 (Rev. 6/76)

CONTRACT NO. N-62470-77-C-7526	TRANSMITTAL NO. 605-2B 606-2B	DATE 10-5-81
PROJECT TITLE AND LOCATION NAVAL REGIONAL MED. CTR. Camp Lejeune, N.C.		

FROM CONTRACTOR  
*Cardinal Contr. Co.*  
TO  
*Lockwood Greene, Engrs.*

**CONTRACTOR USE ONLY**

\*List only one specification division per form.

List only one of the following categories on each transmittal form, and indicate which is being submitted

Contractor Approved       OICC Approval       Deviation/Substitution For OICC Approval

**REVIEWER USE ONLY**

\*\*ACTION CODES  
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R-Resubmit

ITEM NO.	PROJ. SPEC. SECT. & PARA. and/or PROJ. DWG. NO. *	ITEM IDENTIFICATION (Type, size, model no., Mfg. name, dwg. or brochure number)	NO. OF COPIES	ACTION CODES **	REVIEWER'S INITIALS CODE AND DATE		
					FOR	INIT	DATE
		<i>D-4000 Dental Air Compressor</i>					
		<i>Model 2-5T2 NLE5-by</i>	<i>7</i>	<i>RDC</i>	<i>AW</i>	<i>10-9</i>	
		<i>INGERSOLL-RAND</i>		<i>RJD</i>	<i>D</i>	<i>10/7</i>	
		<i>ZEKS Refrigerated Air</i>	<i>7</i>	<i>JR</i>	<i>D</i>	<i>10-6</i>	
		<i>Dryer - Model #3.</i>		<i>AY</i>			
				<i>JJ</i>			

CONTRACTOR'S COMMENTS

COPY OF TRANSMITTAL AND SUBMITTALS TO ROICC: *10-5-81*

CONTRACTOR REPRESENTATIVE (Signature): *W.M.J. Haymaker*

DATE RECEIVED BY REVIEWER: FROM (Reviewer) TO

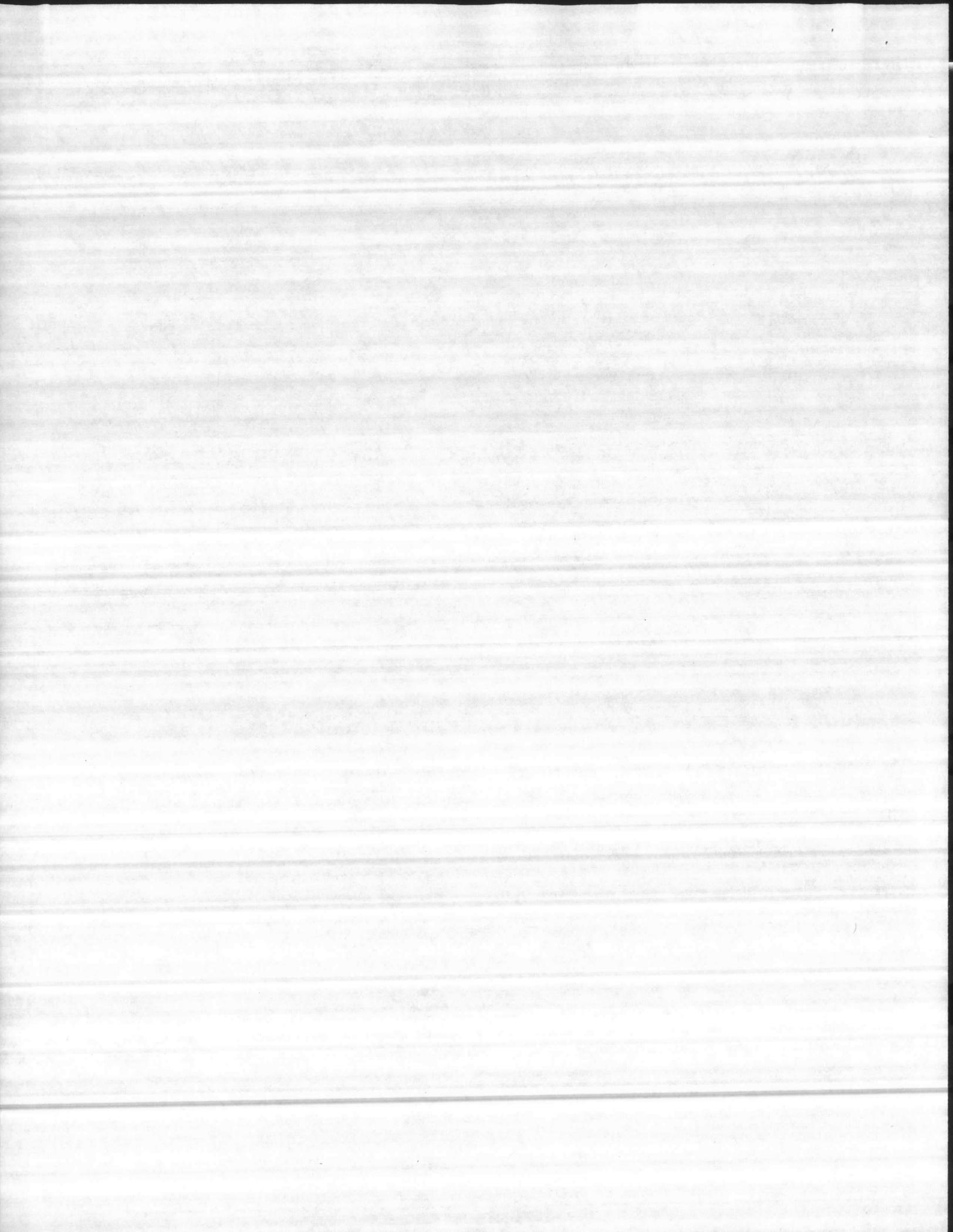
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- Submittals are forwarded to LANTDIV with A-E recommendations indicated in REVIEWER USE ONLY Section and in comments below on ONE COPY of the transmittal form.

REVIEWER'S COMMENTS

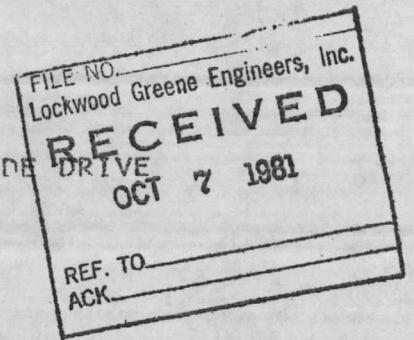


COPIES TO: ROICC (2), LANTDIV (1), A-E (1)

DATE: \_\_\_\_\_ SIGNATURE: \_\_\_\_\_



ERWIN JONES & CO., INC.  
P. O. BOX 240160 - 116 SOUTHSIDE DRIVE  
CHARLOTTE, N. C. 28224  
(PHONE: (704) 525-7630)



CARDINAL CONTRACTING CO., INC.

DATE: SEPTEMBER 21, 1981

P.O. BOX 8408

TRANSMITTAL OF SHOP DRAWINGS:

CAMP LEJEUNE, N.C. 28502

205 BED NAVAL HOSPITAL

NAVAL REGIONAL MEDICAL CENTER

MARINE CORPS BASE

CAMP LEJEUNE, N.C.

WE ARE FORWARDING SHOP DRAWINGS  
IN SIX SETS.

- (1)  ENCLOSED.  
(2)  UNDER SEPARATE COVER.

MFG. & JOB #  
SPECIFICATION 11744

DENTAL AIR COMPRESSOR DE-OIL  
BY INGERSOLL-RAND COMPANY

(Their Model 2-5T2NLE5)

FOR DISPOSITION AS NOTED BELOW:

- (3)  FOR APPROVAL.  
(4)  APPROVED AS NOTED.  
(5)  APPROVED AS NOTED WITH CORRECTIONS.  
(6)  REVISED SHOP DRAWINGS FOR RECORD.  
(7)  REVISED SHOP DRAWINGS FOR FINAL RECORD.  
(8)  RE-DRAW AND RE-SUBMIT FOR FINAL APPROVAL.  
(9)  RE-DRAW AND RE-SUBMIT FOR RECORD.  
(10)  OBTAIN APPROVAL OF DRAWINGS. RETURN ONE SET MARKED "APPROVED" OR "REVISED" FOR OUR RECORD.  
(11)  HAVE DRAWINGS CHECKED VERY CAREFULLY FOR DESIGN, OVERALL DIMENSIONS AND LOCATIONS OF SERVICE FIXTURES AND TO SEE THAT WE HAVE INTERPRETED ALL REVISIONS CORRECTLY.  
(12)  IF ANY FURTHER CHANGES SHOULD BE REQUIRED, ADVISE IMMEDIATELY AS WE ARE PROCESSING SAME FOR PRODUCTION.  
(13)  SEE ATTACHED A COPY OF THE FACTORY'S LETTER OF INSTRUCTION TO US EMPHASIZED AND SECURE ALL ANSWERS REQUIRED.  
(14)  PLEASE RETURN SIGNED APPROVED FURNITURE FINISH SAMPLE OR GIVE NUMBER AND COLOR OF REQUIRED FINISH. WE CANNOT PRODUCE UNLESS WE HAVE THIS INFORMATION.  
(15)  ADVISE YOUR LATEST DELIVERY REQUIREMENT. THIS IS IMPORTANT!  
(16)  PROCEED WITH PRODUCTION. ADVISE YOUR EXPECTED DELIVERY DATE.  
(17)  PLEASE READ THE ENCLOSED VERIFAXED LETTER.  
(18)  FIND CONTENTS SUBMITTED ON PAGE TWO.

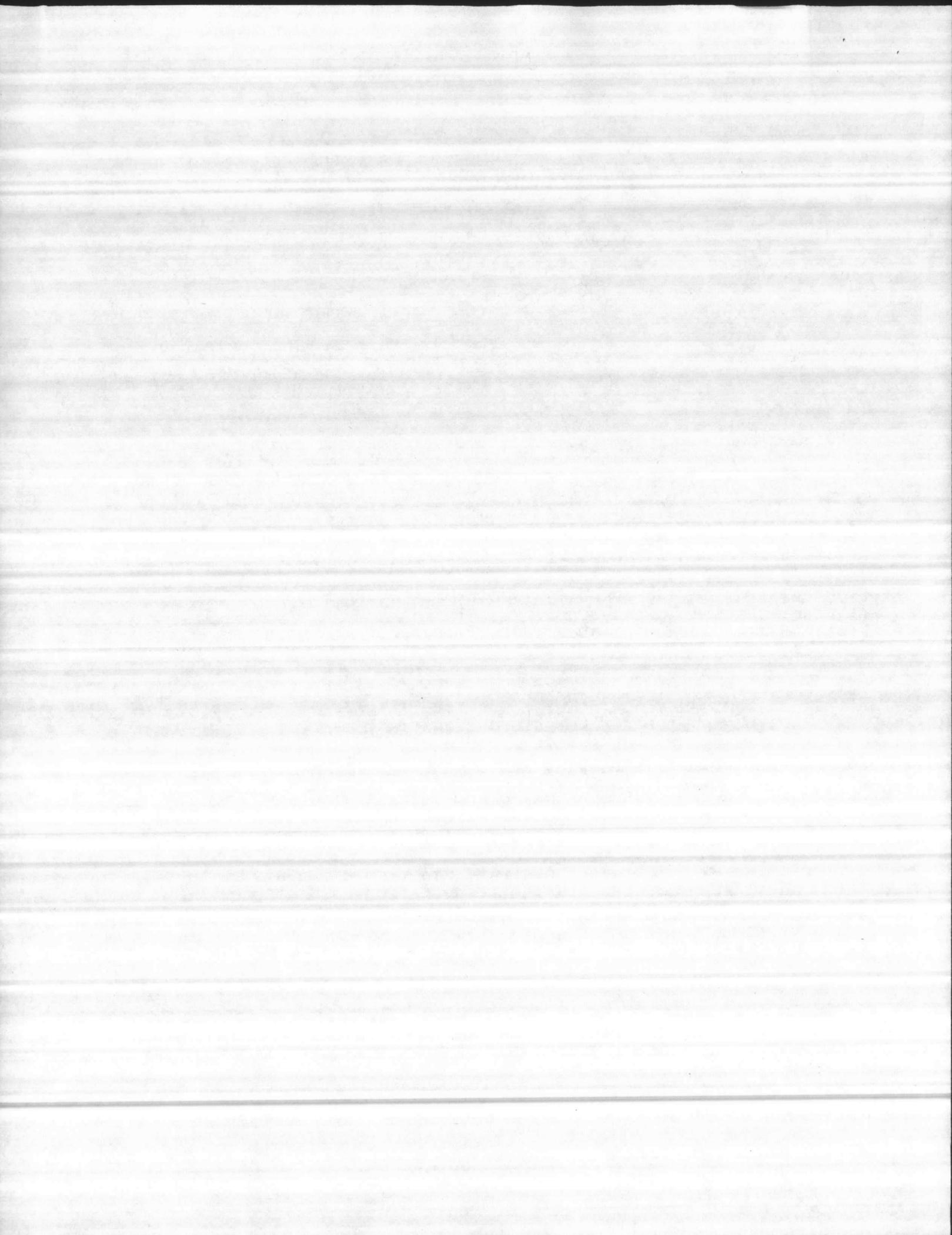
VERY TRULY YOURS,



ERWIN JONES & CO., INC.

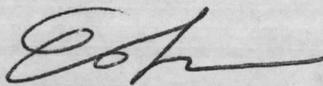
EJ/F (10-80)

5058



- (1) Submitted here for approval is following material:
- (A) Submitted here for approval is INGERSOLL RAND MODEL 2-5T2N1E5 Air Compressor with maximum capacity of 41.6 CFM for free air at 80 PSIG discharge pressure (see sheet H-37775 "Outline and General Arrangement, duplex mounted type 30 air compressor", enclosed).  
The total air compressor package includes:
- a. Alternator package including starters
  - b. Twin water cooled after coolers
  - c. Twin automatic water valves
  - d. Low oil level protection
  - e. Inlet filter silencers
  - f. Galvanized 80 gallon 125 PSIG tank, inside and out
- (B) Accessories submitted are:
1. Zek's refrigerated air dryer model 3, 25 CFM, 10 degree dewpoint complete with automatic drain (see detail sheet enclosed);
  2. Coalescing air line filter, System Manufacturing Corporation Model AM500-06 (See page 2, "Air Processing and Control Equipment by Systems Manufacturing Corporation);
- (C) Letter of certification by Woodward Specialty Sales, Inc. Master Distributor for air compressors for the Ingersoll Rand Company for the Camp LeJeune area.

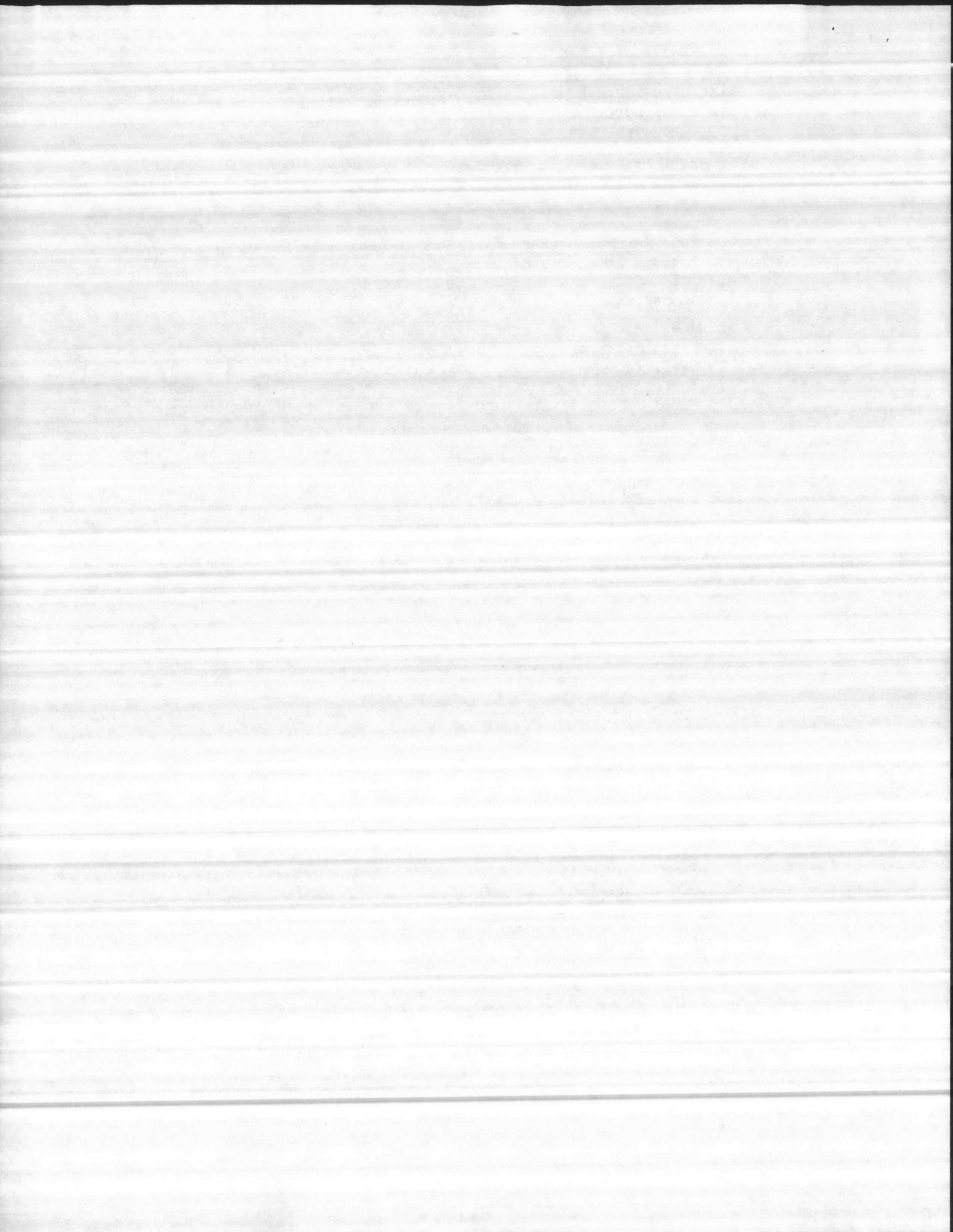
Very truly yours,



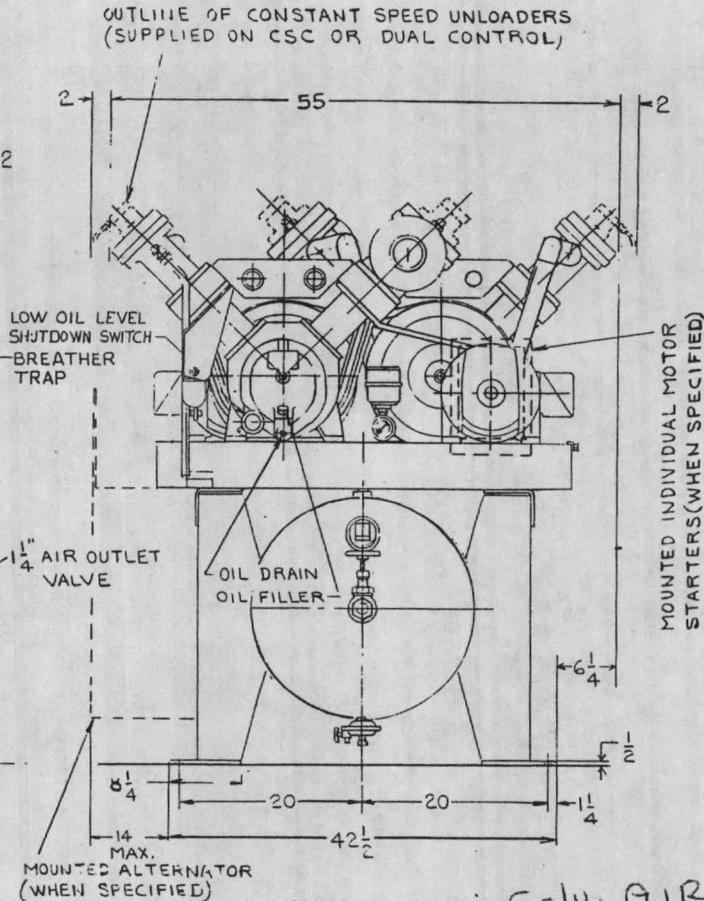
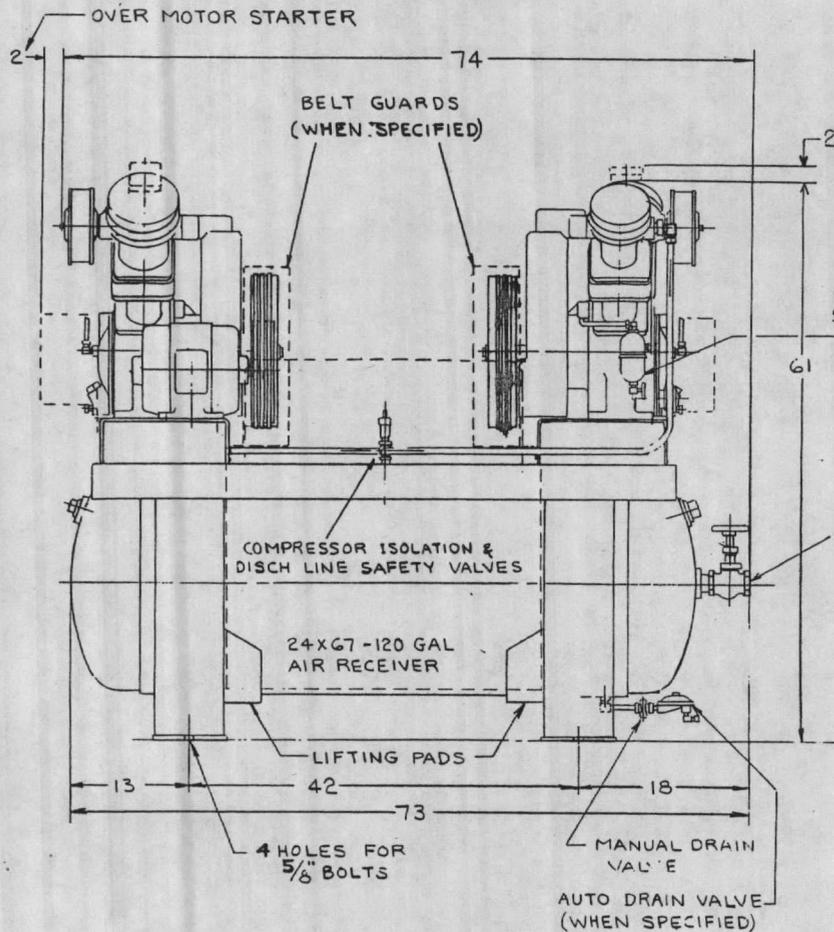
Erwin Jones, President

ERWIN JONES & CO., INC.

EJ/pjm



# Model 2-5T2 NLES Duplex



80 Gallon 200psi. Galv. AIR Tank

Low oil protection; water cooled Aftercooler; Automatic water valve - Camp Lejeune Clinic

208/230/460 - 3-60

Each  
EACH  
EACH

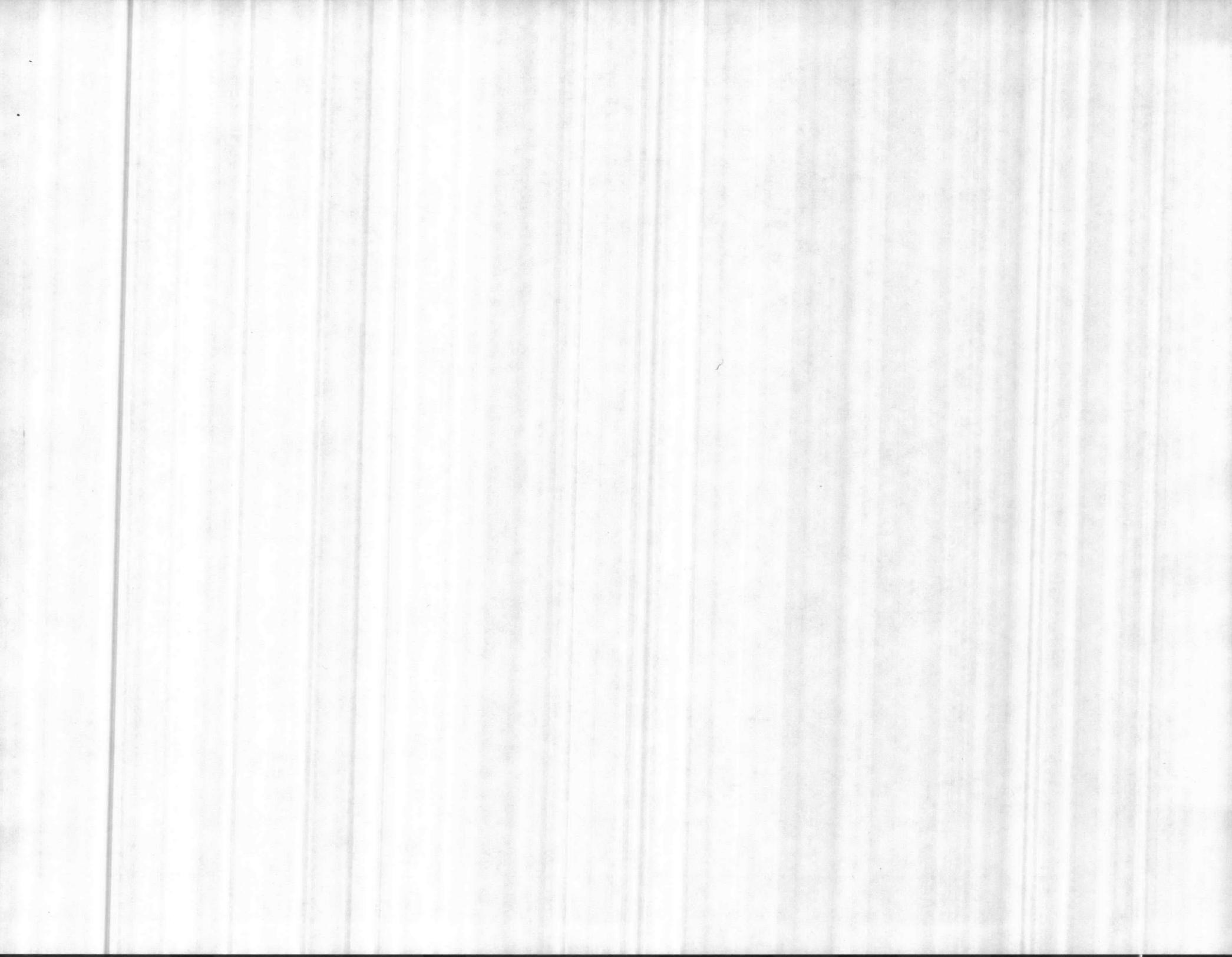
MOTOR HORSEPOWER	5
MOTOR: VOLTS, PHASE, HERTZ	460, 3, 60
MOTOR ENCLOSURE:	ODP
STARTER-TYPE:	AAL
	Combination Alternator
COMPRESSOR R.P.M.:	660
PISTON DISPLACEMENT:	C.F.M. 26.4
DISCH. PR. RATING - PSI	80
ACT. DEL. C.F.M. - FREE AIR	20.2
REGULATION	XAS&S CSC DUAL

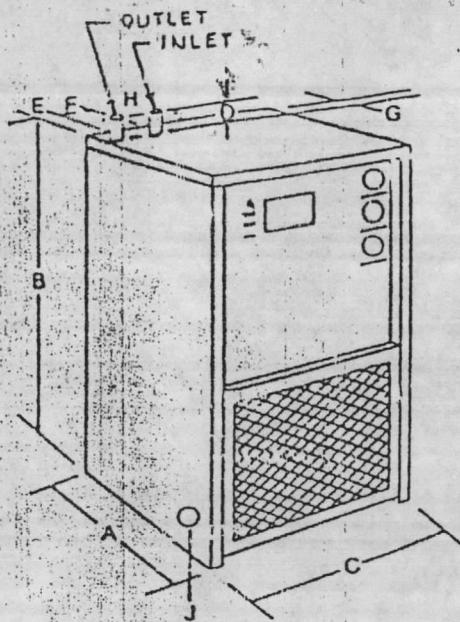
APPROVED FOR	
I-R ORDER NO.:	
CUSTOMER:	
CUSTOMER ORDER NO.:	
PER:	DATE: 9/20/81
JOB:	SPECS:
ITEM:	ARCH/ENGR:
CONTRACTOR:	
SCALE: 1/8	DATE: 3-26-74
CHG: 13-38	

GENERAL ARRANGEMENT	
TYPE 30 COMPRESSORS	
MODELS 2-5T2NLES/7	
INGERSOLL-RAND COMPANY	
CAMPBELLVILLE PLANT	
H-37775	

DIMENSIONS  
Models 2-5T2NLES/7  
Type 30 Compressors

Form SCD 132  
May 1978





3

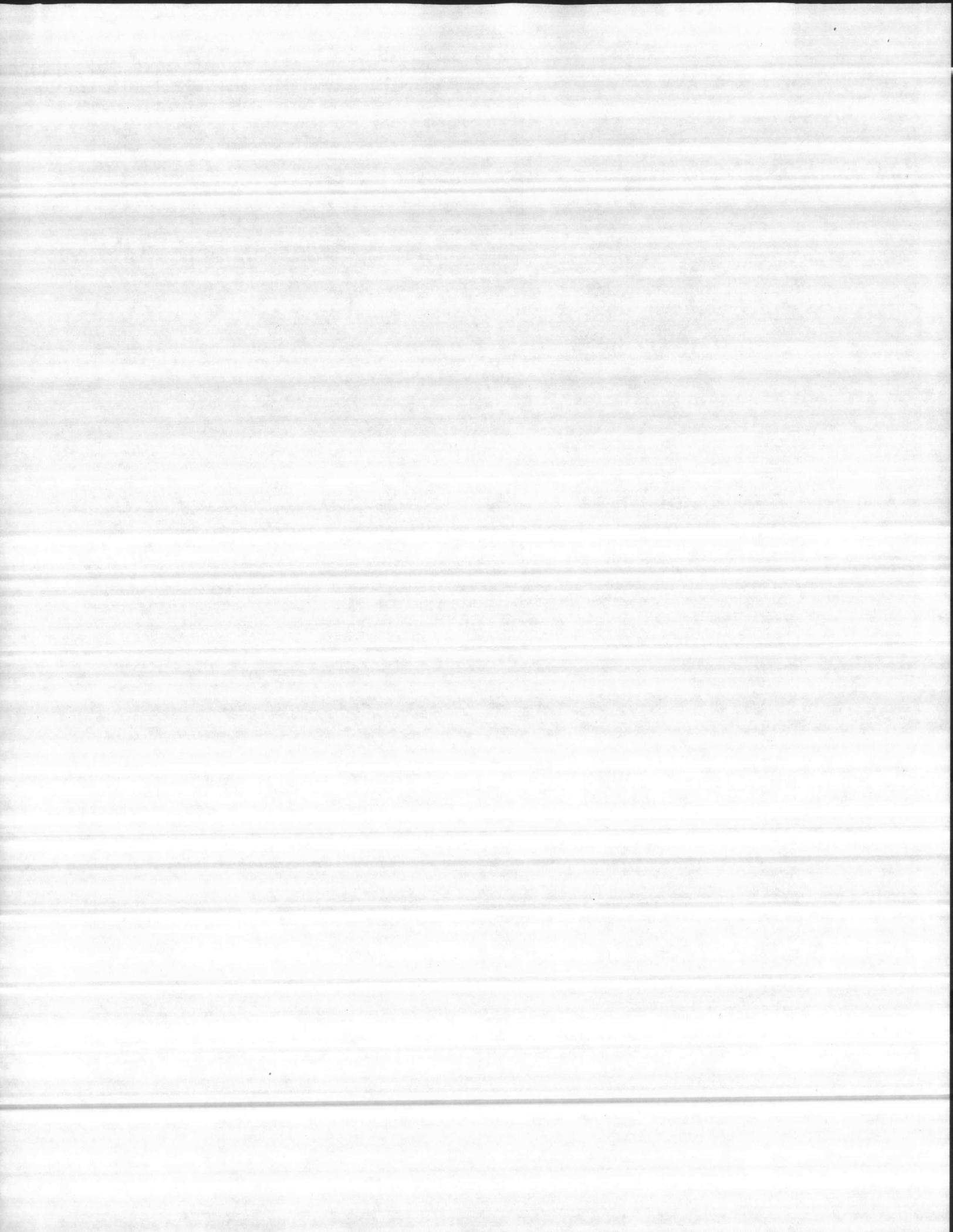
MODEL NUMBER	INCH	CM	INCH	CM	INCH	CM	INCH	CM
A DEPTH	20	51	20	51	26	66	26	66
B HEIGHT	25	64	31	79	39	99	53	135
C LENGTH	20	51	20	51	29	74	29	74
D	2	5	2	5	3	8	3	8
E	3	8	3	8	4	10	4	10
F	4	10	4	10	5	13	5	13
G	1	2.5	1	2.5	2	5	2	5
H AIR CONN	1" MPT		1" MPT		2" MPT		2 1/2" MPT	
J DRAIN	1/4" FPT		1/4" FPT		1/2" MPT		1/2" MPT	

ZLKS REFRIGERATED AIR DRYER MODEL 3  
 PERFORMANCE: 25 SCFM @ 80 PSI  
 ELECTRIC: 5 AMPS - 110V  
 AUTOMATIC CONDENSATE DRAIN INCLUDED

DRYER HAS BEEN WIRED AS PART OF  
 COMPRESSOR (480V, 3Φ) ON DWGS.

THIS WILL HAVE TO BE CHANGED FOR 110V.

35° - 40° F





# Woodward Specialty Sales, Inc.

distributor for Ingersoll-Rand

## CERTIFICATION

REF: 205 Bed Naval Hospital  
Naval Regional Medical Center  
Marine Corps Base  
Camp LeJeune, N.C.

September 20, 1981

### TO WHOM IT MAY CONCERN:

I hereby certify that all materials and construction submitted here for item D-4000 meets the minimum requirements of section 11744 compressor, air, <sup>1,10</sup> dental shown in section 11744 dental equipment, (paragraph 8.5.2. thru 8.5.6. inclusive) and as outlined below:

That we submit an air compressor package consisting of an Ingersoll-Rand Model 2-5T2 NLE 5 duplex air compressor with a maximum total capacity for free air of 41.6 a CFM for free air at 80 PSIG (as detailed on attached Ingersoll-Rand form SCD-132, May 1978);  
Zeks model 3 refrigerated air dryer, and SMC model AM 500-06 G .3 micron filter.

It should be noted that Woodward Specialty Sales, Inc. is the Master Distributor for the Ingersoll-Rand Co. for a wide geographical area (including the Camp LeJeune area) and as such is the prime source of material supply and factory authorized services for said area for Ingersoll-Rand Co. on compressor products; that as Ingersoll-Rand's only Authorized service branch in the Camp LeJeune area for air compressor products we are well qualified to make such a certification.

It should be noted that there are some areas of choice in the above mentioned specification and to be specific as to which choices we offer here we especially refer you to the following:

(1) Compressor type: Paragraph 8.1.2. The oil free compressor will be reciprocating type.

Drives: Para. 8.1.5. Drives shall be "V"-Belt.

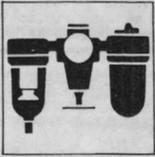
Receiver: Para. 8.1.7. The <sup>20</sup> gallon tank meets all codes, etc. for 125 PSIG.

This submitted equipment meets all other specified requirements.

Ed Walkup, Area Representative  
Woodward Specialty Sales, Inc.  
(Master Distributor For Ingersoll-Rand Co.)

Mailing Address: P.O. Box 11802, Charlotte, North Carolina 28220  
4429 South Boulevard, Charlotte, North Carolina 28209 • (704) 525-0124  
Knoxville, Tennessee  
Wilmington, North Carolina

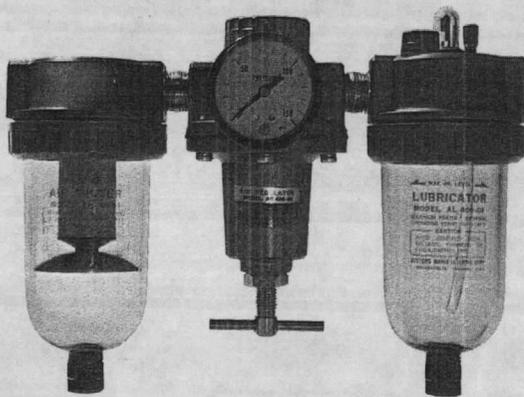




# AIR PROCESSING AND CONTROL EQUIPMENT

## COMBINATION UNIT

Clean dry air, accurate pressures and consistent lubrication can be obtained in a single pass with this standard combination unit. Maximum choice in model combinations to meet your exact requirements.

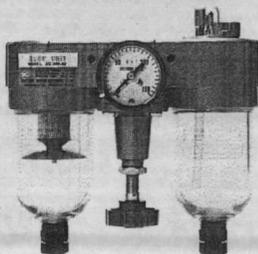


Model Number	Pipe size (Inches)	Components			Overall Width Inches (mm)	Overall Height Inches (mm)
		Filter	Regulator	Lubricator		
AC100-01	1/8	AF100	AR100	AL100	5 7/8 (148)	4 7/8 (124)
AC100-02	1/4	AF100	AR100	AL100	5 7/8 (148)	4 7/8 (124)
AC200-02		AF200	AR200	AL200	8 1/8 (206)	6 1/2 (165)
AC300-02		AF400	AR300	AL400	10 3/8 (264)	7 7/8 (199)
AC400-02	3/8	AF400	AR400	AL400	10 1/2 (267)	7 7/8 (199)
AC200-03		AF200	AR200	AL200	8 1/8 (206)	7 1/2 (189)
AC300-03		AF400	AR300	AL400	10 3/8 (264)	7 7/8 (199)
AC400-03	1/2	AF400	AR400	AL400	10 1/2 (267)	7 7/8 (199)
AC400-04		AF400	AR400	AL400	10 1/2 (267)	7 7/8 (199)
AC400-06	3/4	AF400	AR400	AL400	11 1/2 (293)	8 1/4 (207)
AC500-06		AF500	AR500	AL500	12 3/8 (313)	10 1/4 (254)
AC600-10	1	AF600	AR600	AL600	14 1/8 (359)	11 1/8 (280)
AC800-12	1 1/4	AF800	AR820	AL800	16 3/4 (425)	15 (379)
AC800-14	1 1/2	AF800	AR820	AL800	16 3/4 (425)	15 (379)
AC900-20	2	AF900	AR900	AL900	20 1/8 (512)	19 3/8 (491)

Max. supply pressure: 250 psig  
 F—Filter with Float-type Auto-Drain. (Not available for AC100)  
 D—Filter with Differential pressure type Auto-Drain. (Not available for AC100, AC800 & AC900)  
 N—Non-Relieving Type Regulator  
 Note: When ordering, add suffix F, D, or N after model number, if required.

## MINI-LUBE UNIT

The three functions of the filter, lubricator, and regulator are combined into one compact unit. Easy installation, space saving and economically priced.



Model Number	Pipe size (Inches)	Overall Width Inches (mm)	Overall Height Inches (mm)
AU100-01	1/8	4 3/4 (120)	5 (126)
AU100-02	1/4	4 3/4 (120)	5 (126)
AU200-02		6 1/2 (165)	6 1/2 (165)
AU300-03	3/8	6 1/2 (165)	7 1/2 (188)

Max. supply pressure: 250 psig.  
 F—Filter with Float-Type Auto-Drain. (Not available for AU 100)  
 D—Filter with Differential Pressure type Auto-Drain. (Not available for AU 100)  
 N—Non-relieving Type Regulator.  
 Note: When ordering, add suffix F, D or N after model number, if required.

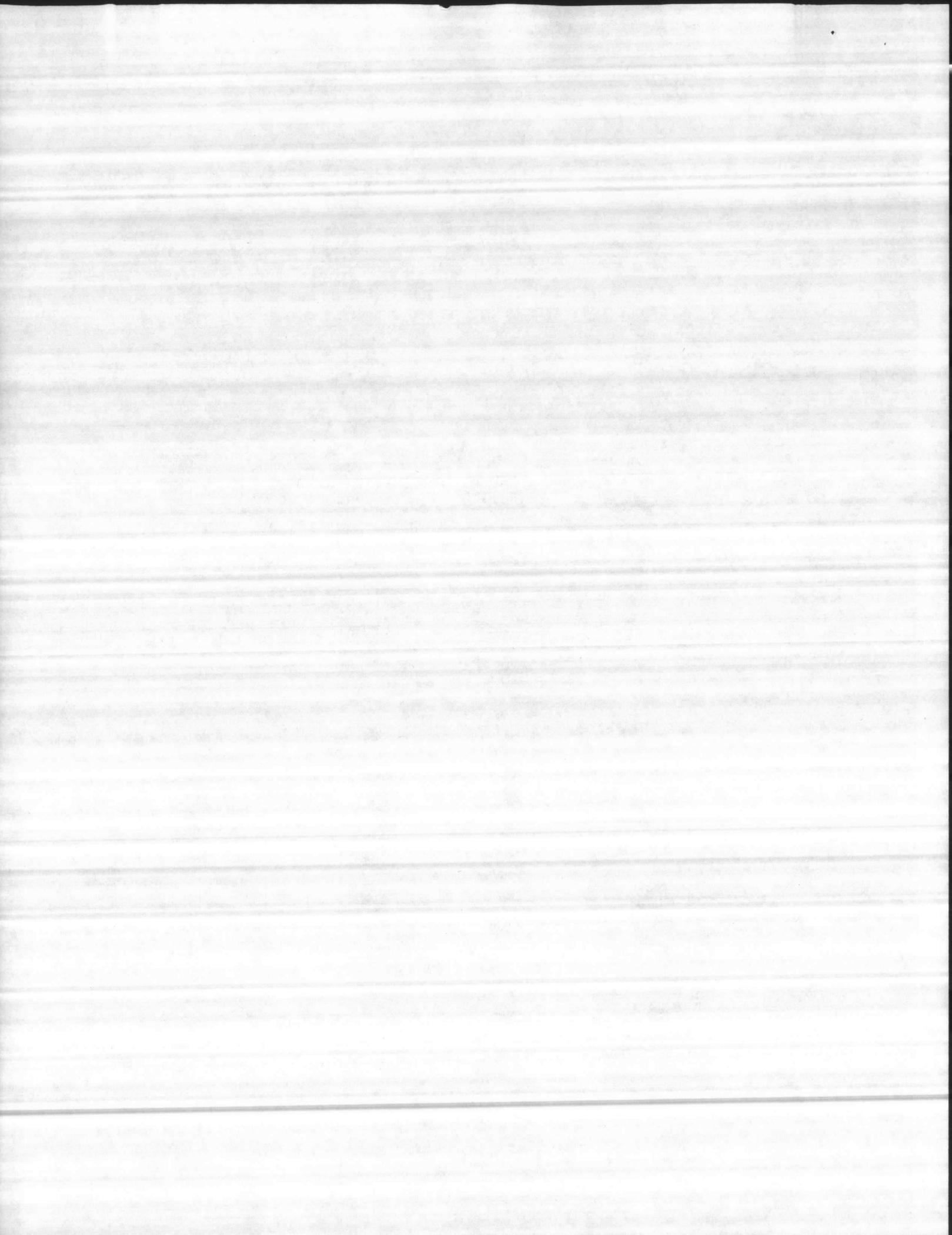


**Woodward Specialty Sales, Inc.**  
 P.O. Box 11802  
 Charlotte, North Carolina 28220  
 [704] 525-0124

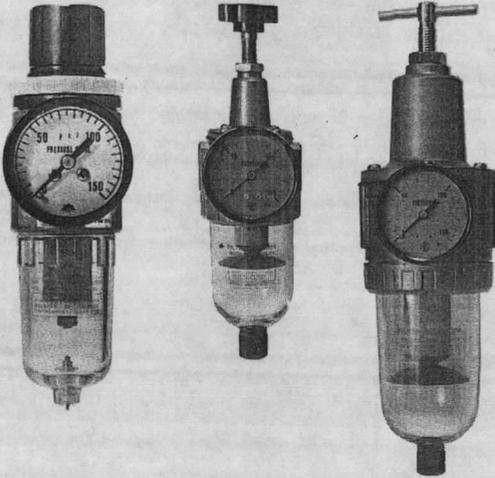


## SYSTEMS MANUFACTURING CORPORATION

Park Fletcher Industrial & Research Center  
 5538 W. Raymond Street • Indianapolis, Indiana 46241 • AC 317-247-1523/4  
 Telex 27-2184



## FILTER/REGULATOR COMBINATION



This Filter/Regulator Combination is designed for various applications where space for individual mounting of filter and regulator is not available.

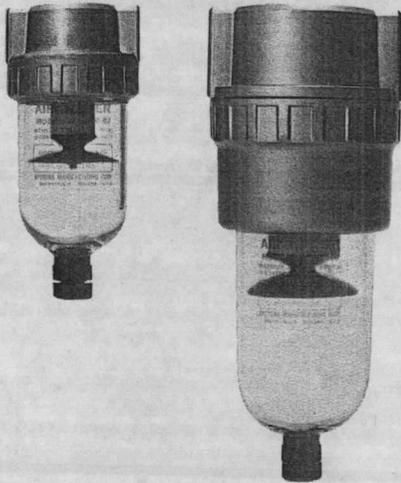
Model Number	Pipe size (Inches)	Air Flow* Scfm	Diameter Inches (mm)	Overall Height Inches (mm)
AW100-01	1/8	10	1 1/2 (40)	6 7/8 (174)
AW111-01	1/8	10	1 1/2 (40)	5 3/4 (144)
AW100-02	1/4	11	1 1/2 (40)	6 7/8 (174)
AW111-02	1/4	11	1 1/2 (40)	5 3/4 (144)
AW200-02	1/2	35	2 1/2 (63)	8 1/4 (210)
AW400-02	3/4	74	3 1/4 (84)	11 (275)
AW200-03	1/2	51	2 1/2 (63)	8 1/4 (210)
AW400-03	3/4	137	3 1/4 (84)	11 (275)
AW400-04	1/2	146	3 1/4 (84)	11 (275)

\*At the supply pressure of 100 psig and delivery pressure of 80 psig with the standard 40 micron element. Standard regulation range: 3-125 psig. Operating temperature range: 3-125 psig. When non-relieving type is required, add suffix N after model number.

ATLANTIC DIVISION  
NAVAL FACILITIES ENGINEERING COMMAND  
NORFOLK, VIRGINIA 23511

APPROVED \_\_\_\_\_  
APPROVED AS NOTED \_\_\_\_\_  
DISAPPROVED \_\_\_\_\_

## FILTERS

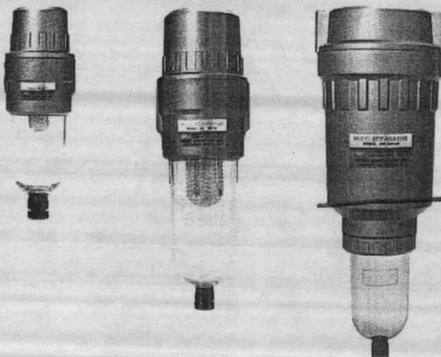


SUBJECT TO THE REQUIREMENTS OF  
SMC filters offer the widest choice for your exact requirements, while assuring superior efficiency in removing contaminants to supply clean, dry air. Manual or auto-drain type available.

Model Number	Pipe size (Inches)	Air Flow* Scfm	Diameter Inches (mm)	Overall Height Inches (mm)
AF100-01	1/8	10	1 1/2 (40)	10 (100)
AF100-02	1/8	10	1 1/2 (40)	10 (100)
AF200-02	1/4	11	2 1/2 (63)	5 1/2 (140)
AF400-02	3/8	63	3 1/4 (80)	6 1/4 (170)
AF200-03	1/2	35	2 1/2 (63)	6 3/4 (170)
AF400-03	3/4	85	3 1/8 (80)	6 3/4 (170)
AF400-04	1/2	125	3 1/8 (80)	6 3/4 (170)
AF400-06	3/4	200	3 7/8 (80)	10-20-25 (180)
AF500-06	1	252	3 1/2 (90)	9 (227)
AF600-10	1 1/4	310	4 (100)	10 (251)
AF800-12	1 1/2	417	5 1/8 (130)	16 1/2 (408)
AF800-14	1 1/2	484	5 7/8 (150)	16 1/2 (408)
AF900-20	2	742	7 7/8 (200)	19 1/4 (488)

\*At 100 psig, 7 psig pressure drop with standard 40 micron element. Max. supply pressure: 250 psig. Operating temperature: up to 140°F

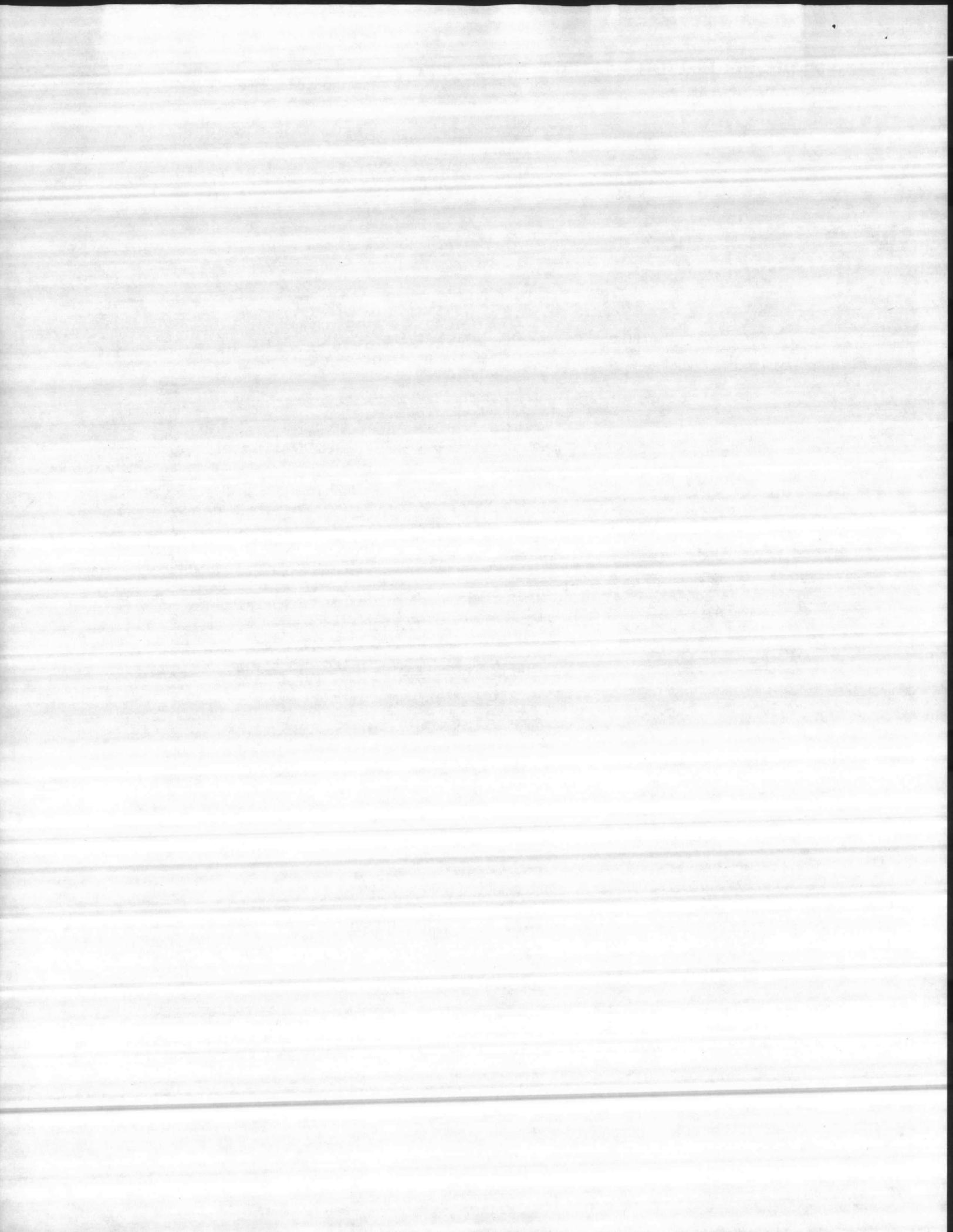
## MIST SEPARATOR



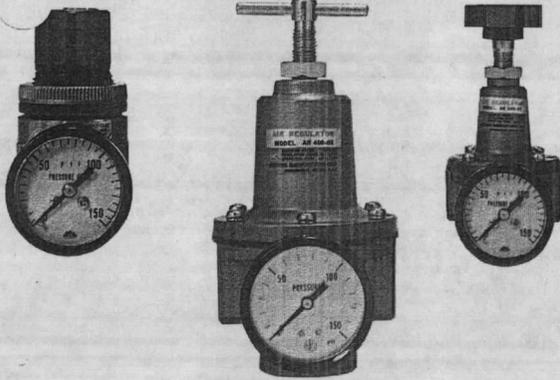
The Mist-Separator has a sub-micro mesh with the capacity to remove micro particles of oil or water mist up to 99.9%. Especially suited for applications where pure air is essential such as in spraying and instrumentation.

Model Number	Pipe size (Inches)	Air Flow* Scfm	Diameter Inches (mm)	Overall Height Inches (mm)
AM200-01	1/8	18	2 1/2 (63)	7 1/4 (183)
AM200-02	1/4	20	2 1/2 (63)	7 1/4 (183)
AM300-02	3/8	56	3 3/8 (85)	11 1/2 (294)
AM300-03	1/2	74	3 3/8 (85)	11 1/2 (294)
AM300-04	3/4	92	3 3/8 (85)	11 1/2 (294)
AM500-06	1	166	5 1/2 (140)	15 1/8 (383)
AM600-10	1 1/4	272	6 3/4 (170)	17 3/4 (450)

\*At the initial state of the filter cartridge with the supply pressure of 100 psig and 5 psig pressure drop. Max. supply pressure: Model AM200 & Model AM300-250 psig. Model AM500 & Model AM600-150 psig. Operating temperature up to 140°F. Filtering accuracy: 0.3 micron.



## REGULATORS



Every SMC regulator assures stable pressure regulation with comparatively little differential pressure at high air flow plus superior repeatability necessary to maintain constant operation of pneumatic instruments.

Model Number	Pipe size (Inches)	Air Flow* Scfm	Diameter Inches (m/m)	Overall Height Inches (m/m)
AR100-01P	1/8	20	1 1/2 (40)	2 7/8 (72)
AR100-01		20	1 1/2 (40)	4 (100)
AR100-02P	1/4	23	1 1/2 (40)	2 7/8 (72)
AR100-02		23	1 1/2 (40)	4 (100)
AR200-02P		49	2 1/8 (52)	3 3/8 (87)
AR200-02		49	2 1/8 (50)	4 1/2 (112)
AR300-02		84	2 7/8 (74)	5 7/8 (150)
AR400-02		109	3 1/8 (80)	6 3/8 (160)
AR200-03P	3/8	54	2 1/8 (52)	3 3/8 (87)
AR200-03		54	2 1/8 (50)	4 1/2 (112)
AR300-03		88	2 7/8 (74)	5 7/8 (150)
AR400-03		140	3 1/8 (80)	6 3/8 (160)
AR400-04	1/2	159	3 1/8 (80)	6 3/8 (160)
AR400-06	3/4	220	3 3/8 (85)	6 3/4 (170)
AR500-06		265	3 3/4 (95)	7 1/2 (190)
AR600-10	1	318	4 3/4 (118)	9 3/4 (246)

\*At the supply pressure of 100 psig and delivery pressure of 80 psig.  
Max. supply pressure: 400 psig. Standard regulation range: 3-125 psig.  
Operating temperature: up to 140°F  
When non-relieving type is required, add suffix N after model number.

P= Panel Mount

## REGULATORS/Pilot Type

Designed with extra precision pressure characteristics for use in instrumentation, laboratories and air gauging where pressure accuracy is of critical importance. This is the finest air-regulator currently available and insures excellent repeatability and incredibly high flow capacities.



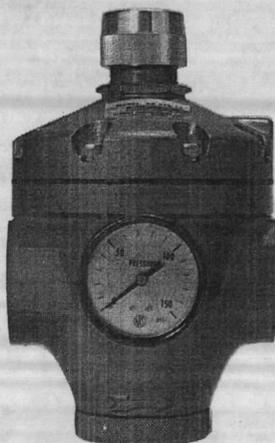
## HIGH PRESSURE

Model Number	Pipe size (Inches)	Air Flow* Scfm	Diameter Inches (m/m)	Overall Height Inches (m/m)
AR420-02	1/4	113	3 3/8 (84)	6 7/8 (175)
AR420-03	3/8	148	3 3/8 (84)	6 7/8 (175)
AR420-04	1/2	187	3 3/8 (84)	6 7/8 (175)
AR620-06	3/4	254	3 3/4 (94)	7 3/8 (186)
AR620-10	1	360	3 3/4 (94)	7 3/8 (186)
AR820-12	1 1/4	565	5 (126)	8 (203)
AR820-14	1 1/2	600	5 (126)	8 (203)
AR920-20	2	626	6 3/8 (160)	9 (228)

\*At the supply pressure of 100 psig and delivery pressure of 80 psig.  
Standard regulation range: 1.5-125 psig.

Max. supply pressure: 250 psig.  
Operating temperature: up to 140°F

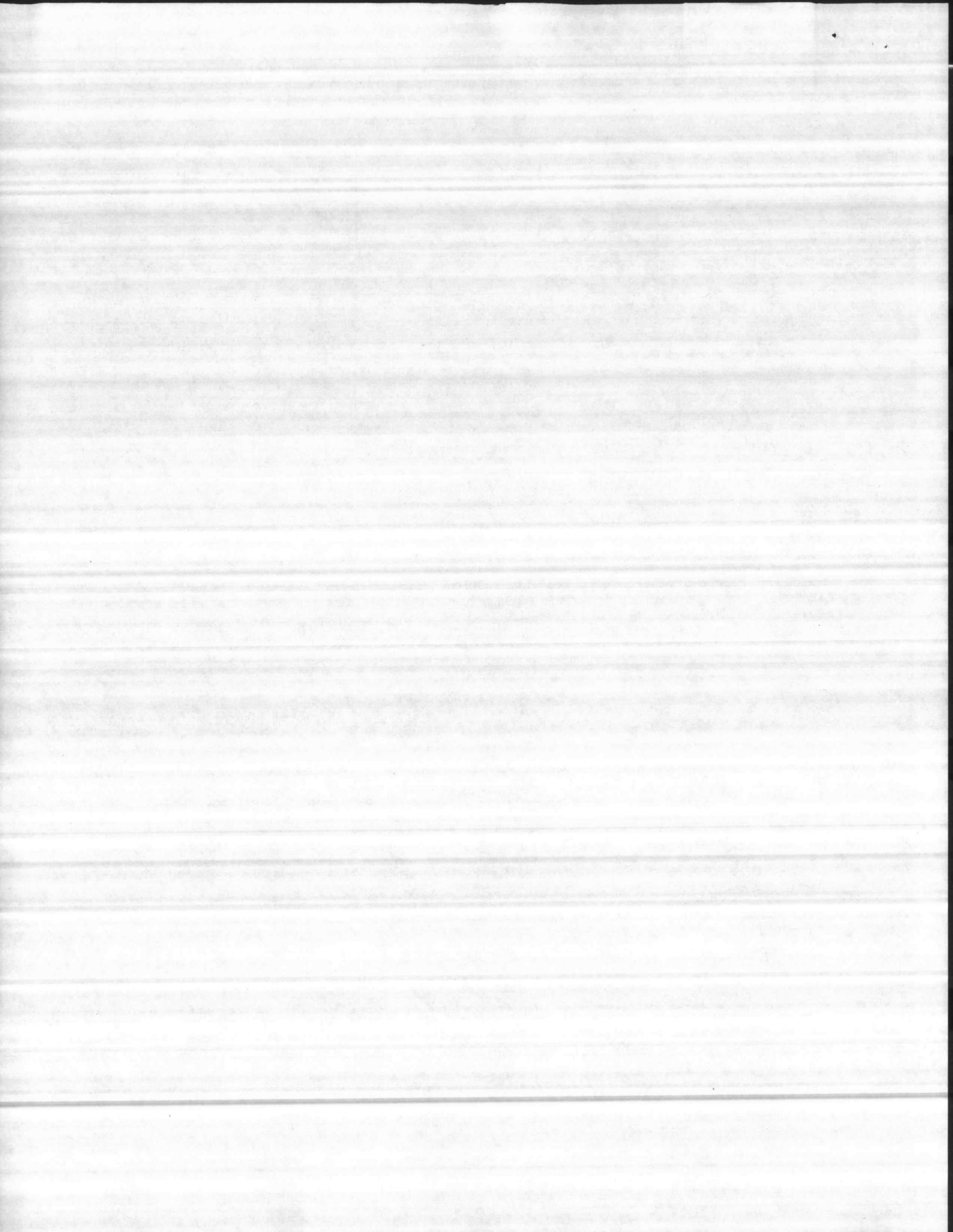
## LOW PRESSURE



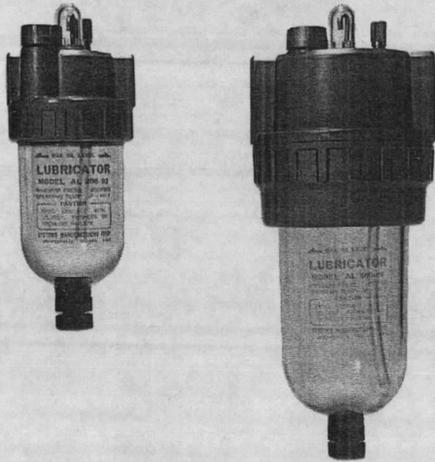
Model Number	Pipe size (Inches)	Air Flow* Scfm	Diameter Inches (m/m)	Overall Height Inches (m/m)
AR430-02	1/4	95	3 3/8 (84)	6 7/8 (175)
AR430-03	3/8	144	3 3/8 (84)	6 7/8 (175)
AR430-04	1/2	178	3 3/8 (84)	6 7/8 (175)
AR630-06	3/4	247	3 3/4 (94)	7 3/8 (186)
AR630-10	1	355	3 3/4 (94)	7 3/8 (186)
AR830-12	1 1/4	494	5 (126)	8 (203)
AR830-14	1 1/2	565	5 (126)	8 (203)
AR930-20	2	628	6 3/8 (160)	9 (228)

\*At the supply pressure of 100 psig and delivery pressure of 30 psig.  
Standard regulation range: 0.7-30 psig.

Max. supply pressure: 280 psig.  
Operating temperature: up to 140°F.



## LUBRICATORS



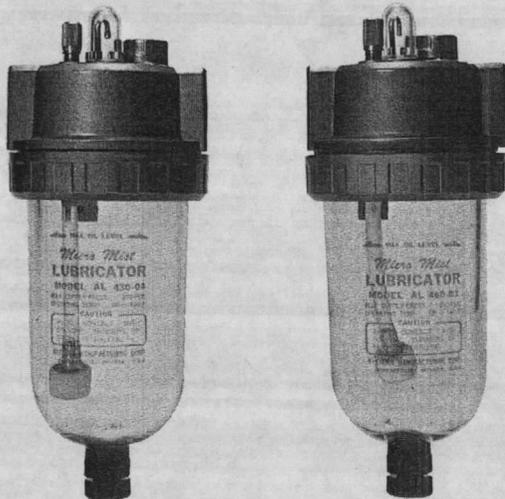
SMC lubricators are designed to atomize lubricating oil into extremely fine particles and distribute a specific rate of oil mist to all instruments to be lubricated. Uniform lubrication is assured even when the air pressure has dropped to extremely low levels.

Model Number	Pipe size (Inches)	Air-Flow* Scfm	EFFECTIVE Bowl Capacity (OZ)	Diameter (A) Inches (mm)	Overall Height (B) Inches (mm)
AL100-01	1/8	6	1	1 1/2 (40)	4 7/8 (122)
AL100-02	1/4	13	1	1 1/2 (40)	4 7/8 (122)
AL200-02		24	3	2 1/2 (63)	6 1/2 (165)
AL400-02	3/8	38	6	3 1/8 (80)	7 7/8 (199)
AL200-03		26	5	2 1/2 (63)	7 1/2 (190)
AL400-03	1/2	73	6	3 1/8 (80)	7 7/8 (199)
AL400-04		142	6	3 1/8 (80)	7 7/8 (199)
AL400-06	3/4	152	6	3 1/2 (90)	8 1/8 (207)
AL500-06		250	6	3 1/2 (90)	10 1/8 (254)
AL600-10	1	320	6	4 (100)	11 1/8 (280)
AL800-12	1 1/4	494	17	4 (100)	11 3/8 (289)
AL800-14		537	17	4 (100)	11 3/8 (289)
AL900-20	2	636	17	4 (100)	11 3/4 (299)

\* At 100 psig, 5 psig pressure drop.  
Max. supply pressure: 250 psig.

Operating temperature: up to 140°F

## LUBRICATORS. Micro-Mist Type



The SMC Micro-Mist Lubricator is the ultimate in the air lubricating, distributing "Ultra Micro Oil Mist" in pipe lines and penetrating small orifices. Successful lubrication is assured to bearings, high speed instruments and cooling devices where high precision lubrication is essential.

### LOW PRESSURE

Model Number	Pipe size (Inches)	Air Flow* Scfm	EFFECTIVE Bowl Capacity (OZ)	Diameter (A) Inches (mm)	Overall Height (B) Inches (mm)
AL430-02	1/4	3.4	6	3 1/8 (80)	7 3/8 (185)
AL430-03	3/8	3.4	6	3 1/8 (80)	7 3/8 (185)
AL430-04	1/2	3.4	6	3 1/8 (80)	7 3/8 (185)

### HIGH PRESSURE

Model Number	Pipe size (Inches)	Air-Flow* Scfm	EFFECTIVE Bowl Capacity (OZ)	Diameter (A) Inches (mm)	Overall Height (B) Inches (mm)
AL460-02	1/4	25.0	6	3 1/8 (80)	7 3/8 (185)
AL460-03	3/8	30.0	6	3 1/8 (80)	7 3/8 (185)
AL460-04	1/2	90.0	6	3 1/8 (80)	7 3/8 (185)

\* The Scfm of Model AL430 is measured at 50 psig, 5 psig pressure drop when the needle valve is fully opened, and the value of Model AL460 is measured at 100 psig, 5 psig pressure drop.  
Max. supply pressure: For Model AL430-50 psig (recommended rate).

For Model AL460-250 psig.

Operating temperature: up to 140°F

Applications: Model AL430...for machine, bearings, gears and chains lubrication.

Model AL460...for tool lubrication.

## OTHER PRODUCTS

### For Pneumatic Control:

Filter, Regulator, Lubricator  
Spray unit, Micro-mist  
2, 3 and 4-way valves

Auto drain valves  
Quick exhaust valves  
Speed control valves

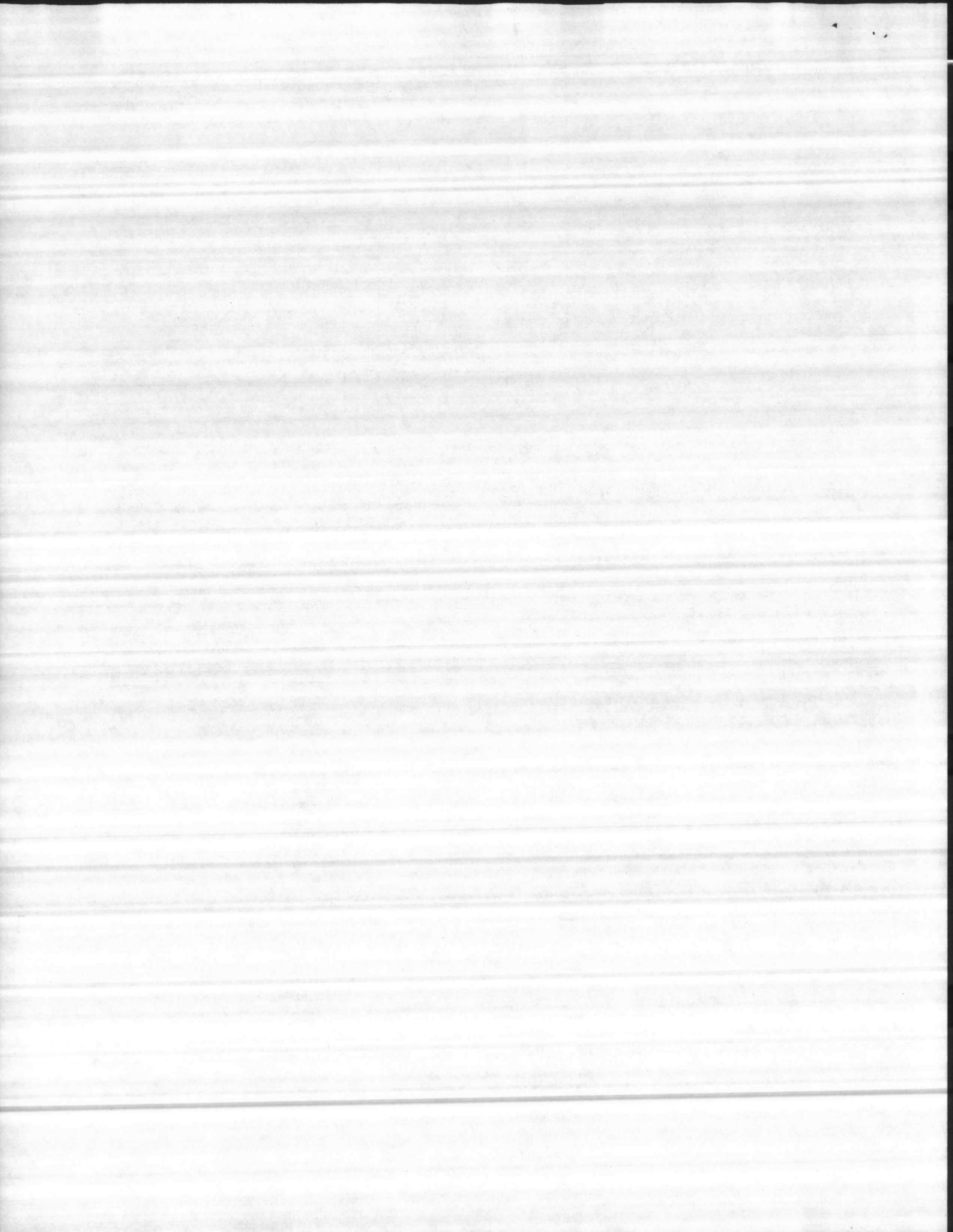
### For Instrumentation:

Precision regulators  
Valve Positioners  
Cylinder positioners

3-valve manifold  
Pressure Switch  
Pneumatic relays

### DISTRIBUTED BY

**WOODWARD SPECIALTY SALES, INC.**  
4429 SOUTH BOULEVARD  
CHARLOTTE, N. C. 28209



# INSTALLATION INFORMATION



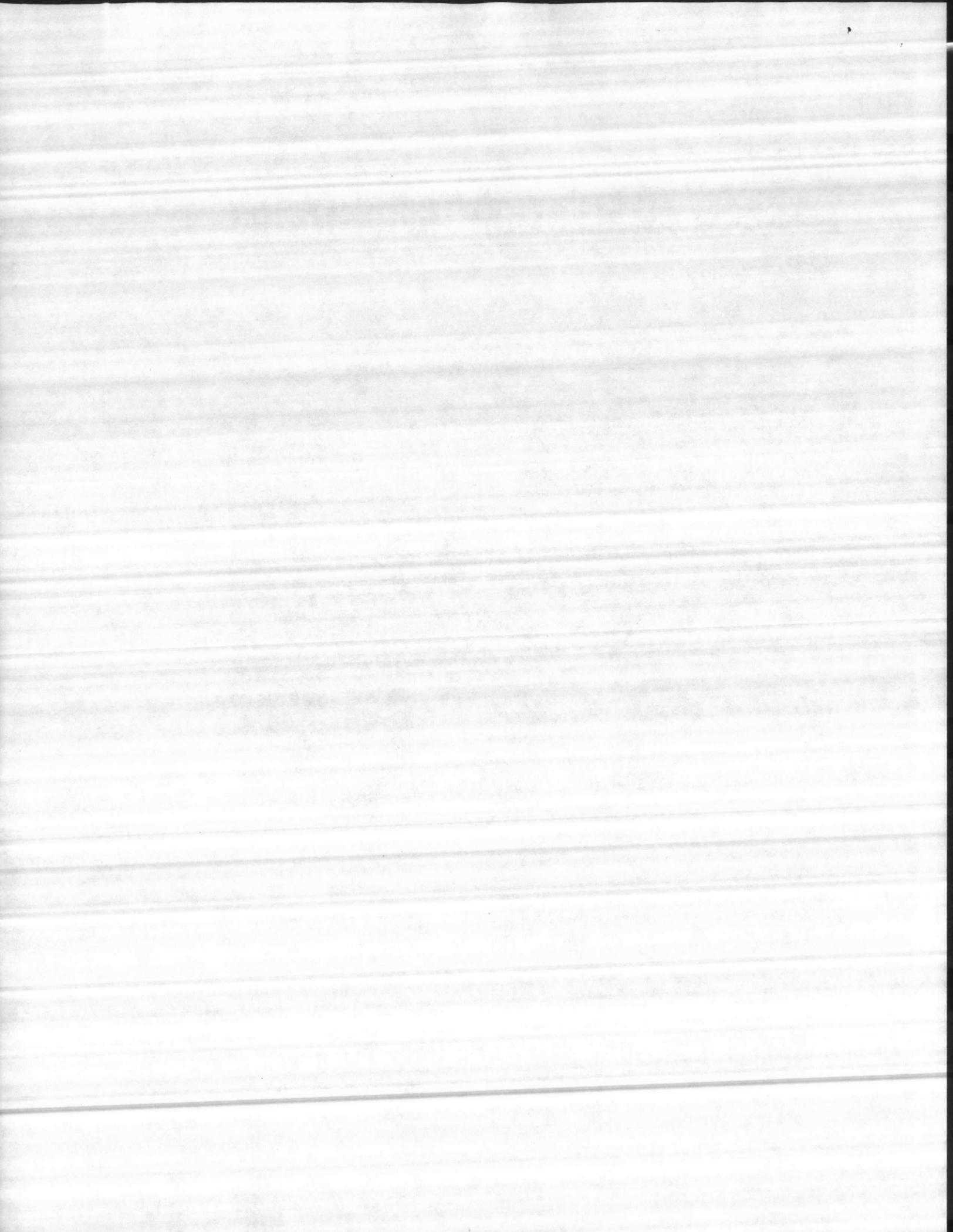
## DYNAMIC-DUAL 1 or 2 HP Oral Evacuation System



a subsidiary of den-tal-ez, inc.

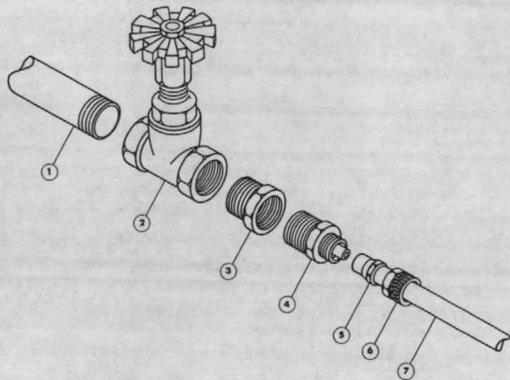
den-tal-ez mfg. co.  
custom vacuum division

1841 S. State College Blvd., Anaheim, CA. 92806 Telephone: (714) 634-1211



# SYSTEM CONNECTIONS

## WATER SUPPLY

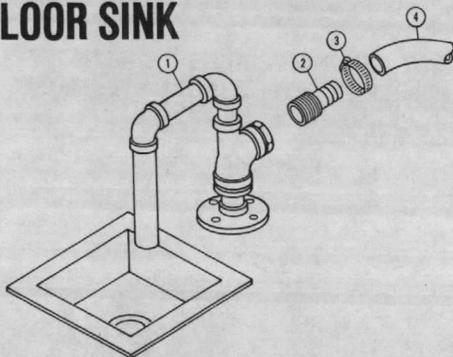


The water going to the unit acts as a pump sealant and cooling agent. The water supply must be on at all times when the Dynamic-Dual is in operation. The plumber is to supply and install a 1/2" gate valve on the water supply line. The 3/8" nylon tubing and connecting fittings are supplied with the unit and are to be connected as illustrated.

DRAWING NO.	QTY.	PART NO.	DESCRIPTION
1	1	Supplied by Plumber	Water Line
2	1	Supplied by Plumber	Valve, Gate, Brass, 1/2"
3*	1	6-4516-041	Bushing, Brass, 1/2" MIP x 3/8" FIP
4*	1	6-4504-067	Adapter, Brass, 3/3" MIP x 3/8" Tube
5*	1	6-4610-007	Sleeve, Compression, Brass, 3/8"
6*	1	6-4579-027	Nut, Brass, 3/8", Nylon Tube
7*	4 Ft.	6-4618-046	Tube, Nylon, 3/8"

\* SUPPLIED IN CONNECTION KIT WITH UNIT.

## FLOOR SINK

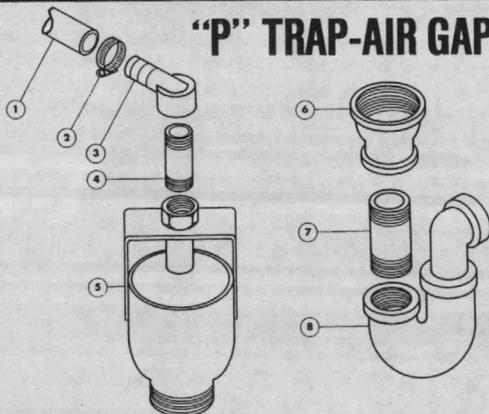


The waste line carries water from the pumps and liquid waste from the operator to the building's sewer system. The exhaust connection should be made by either of two methods depending on local code and building facilities. **A. FLOOR SINK CONNECTION:** Use floor sink adapter SA-200 Part No. 6-4504-013. Install as illustrated.

DRAWING NO.	QTY.	PART NO.	DESCRIPTION
1*	1	6-4504-013	Adapter, PVC, Floor Sink, 1" Barbed Insert
2*	1	6-4504-057	Adapter, PVC, 1" MIP x 1" Insert
3	1	6-4527-003	Clamp, Stainless Steel, 1"
4	6 Ft.	6-4562-015	Hose, Red Neoprene, 1"

\* FLOOR SINK ADAPTER PARTS.

## "P" TRAP-AIR GAP

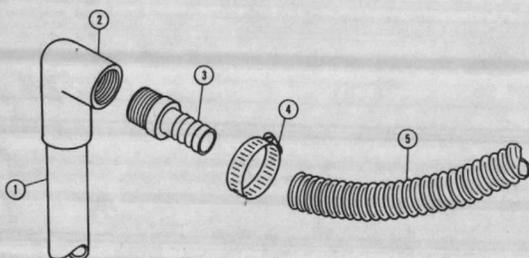


**B. DIRECT CONNECTION TO DURHAM "P" TRAP:** Use "P" trap-air gap, Part No. 6-4620-005. Install as illustrated.

DRAWING NO.	QTY.	PART NO.	DESCRIPTION
1	1	6-4562-015	Hose, Red Neoprene, 1" x 6 Ft.
2	1	6-4527-003	Clamp, Stainless Steel, 1"
3	1	6-4541-077	Elbow, PVC, 1" FIP x 1" Insert
4*	1	6-4578-011	Nipple, Brass, 1" x Close
5*	1	6-4504-075	Adapter, Air Gap, 2"
6*	1	6-4590-022	Reducer Bell, Galv. 2" x 1 1/2"
7*	1	6-4578-012	Nipple, Galv., 1 1/2" x Close
8	1	6-4620-002	Trap, "P" Durham, 1 1/2"

\* "P" TRAP-AIR GAP PARTS.

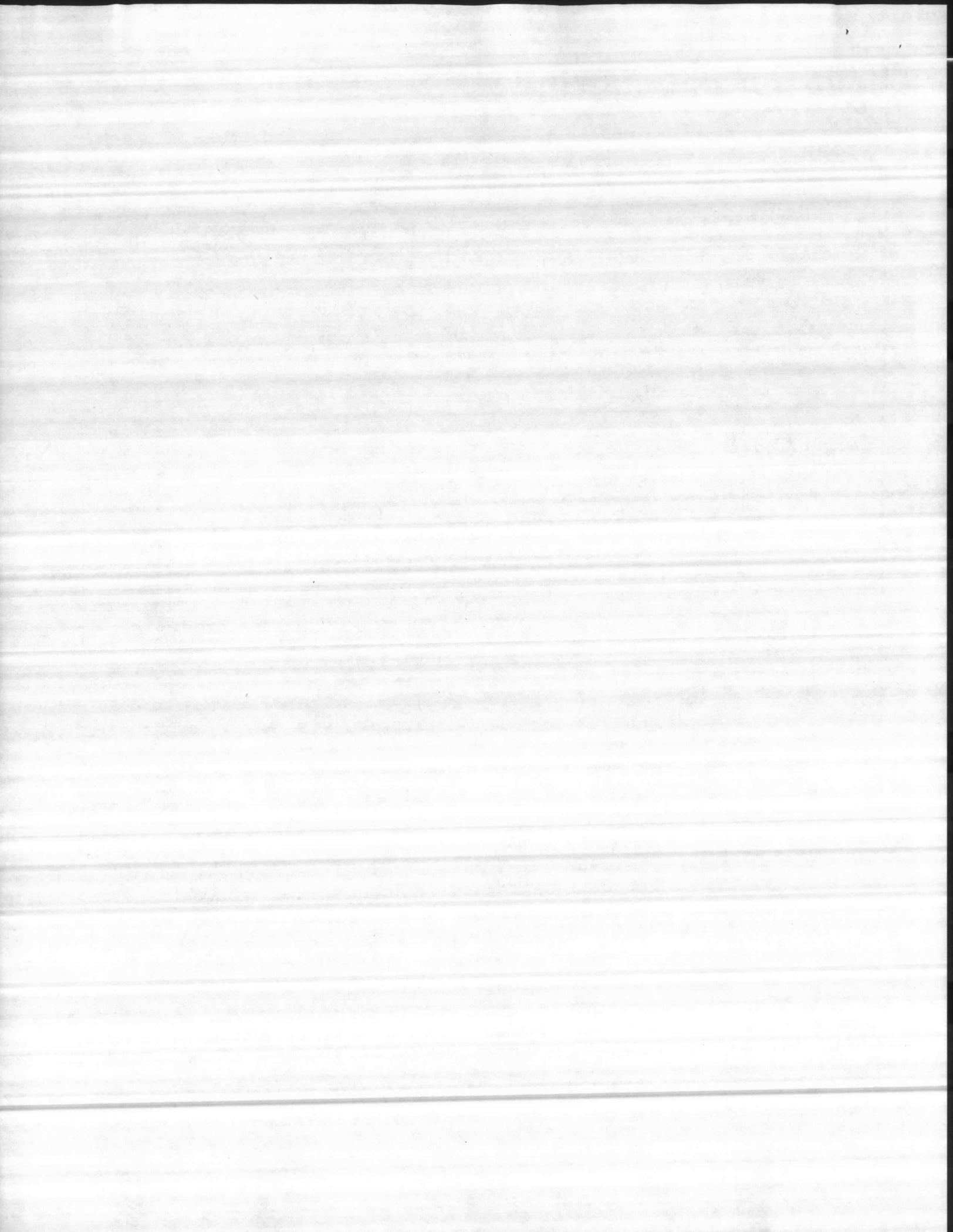
## VACUUM LINE



The evacuation system is connected to the vacuum line with the white spirallock hose and fittings supplied in the installation kit.

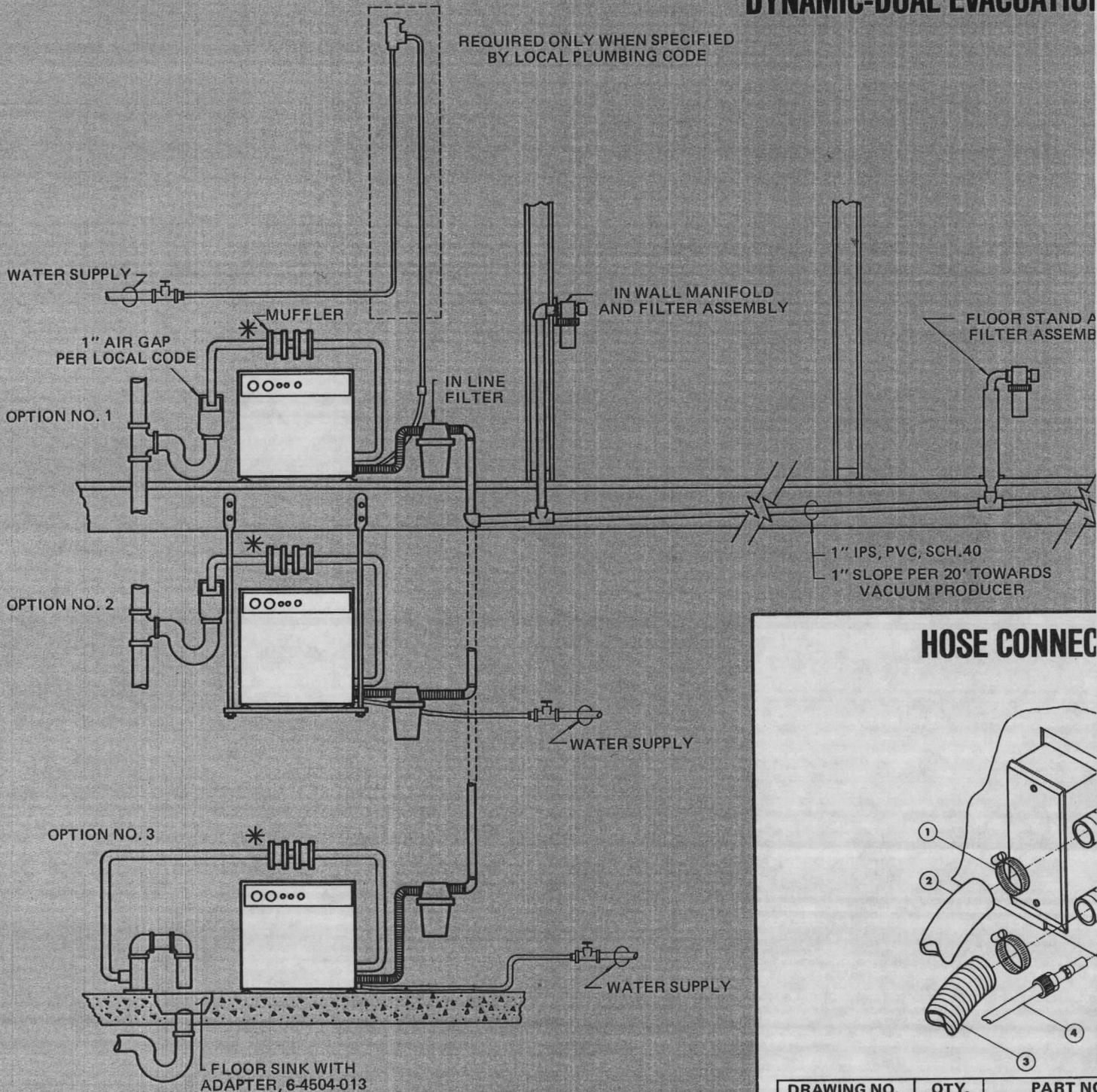
DRAWING NO.	QTY.	PART NO.	DESCRIPTION
1		Supplied by Plumber	Vacuum Line, 1" IPS, PVC, SCH. 40
2*	1	6-4541-082	Elbow, PVC, 1"S x 1" FIP
3*	1	6-4504-057	Adapter, PVC, 1" MIP x 1" Insert
4*	1	6-4527-003	Clamp, Stainless Steel, 1"
5*	6 Ft.	6-4562-010	Hose, Spirallock, 1" White

\* SUPPLIED IN CONNECTION KIT WITH UNIT.

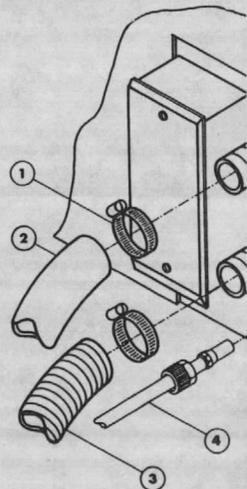


# TYPICAL INSTALLATION

## DYNAMIC-DUAL EVACUATION

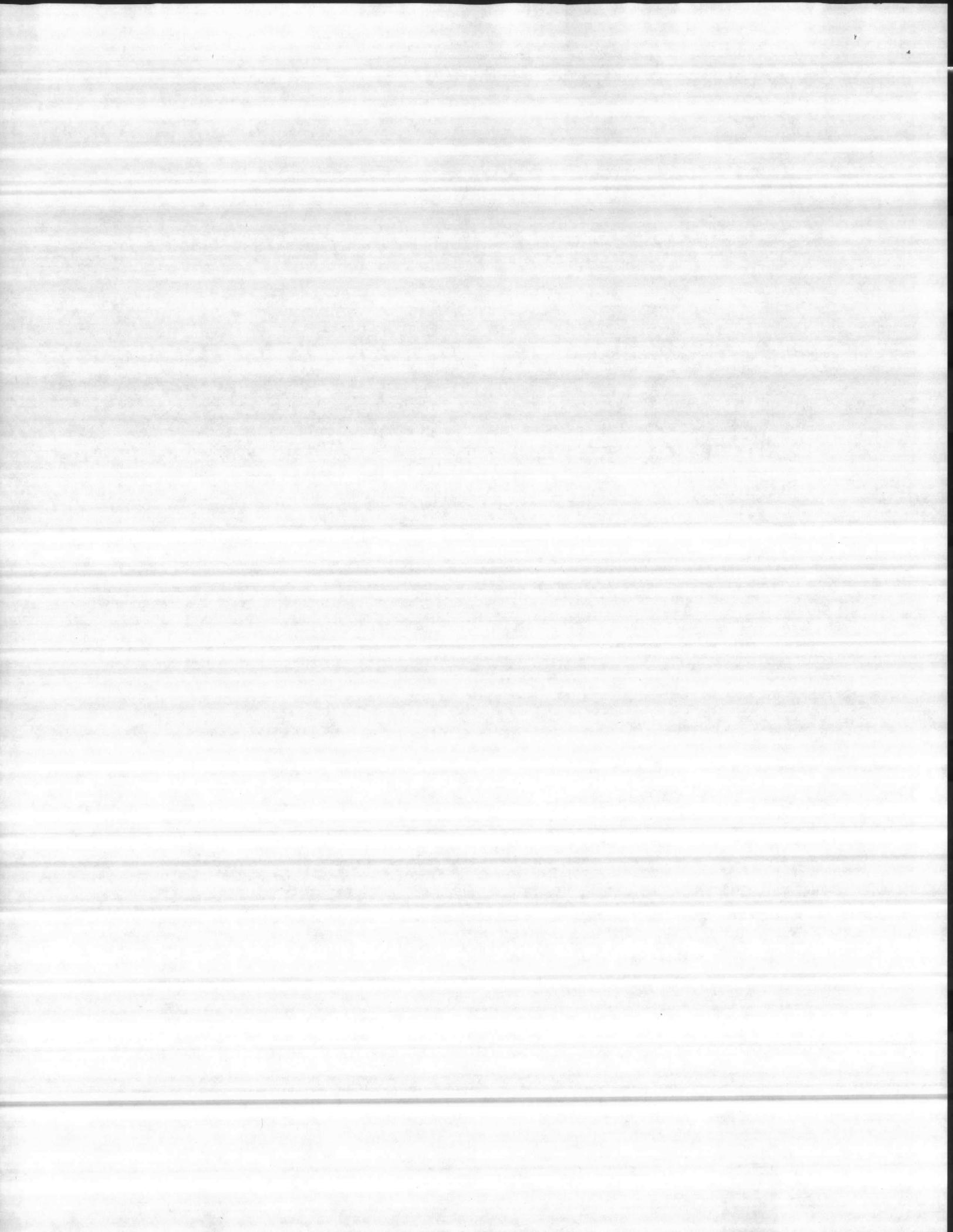


### HOSE CONNECTION



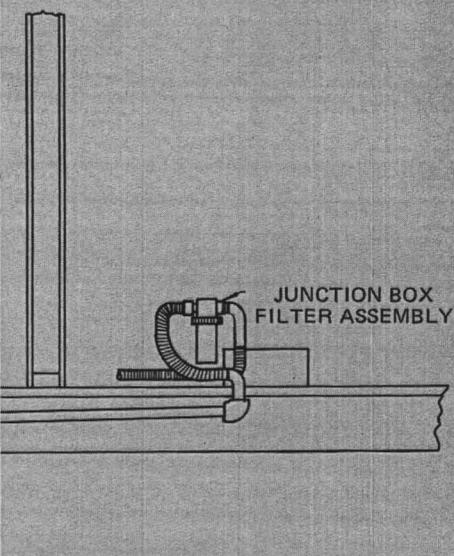
DRAWING NO.	QTY.	PART NO.
1	2	6-4527-0
2	1	6-4562-0
3	6 Ft.	6-4562-0
4	6 Ft.	6-4618-0
5		

\* POSITION OF MUFFLER FOR ILLUSTRATION CLARITY ONLY. EXHAUST LINE SHOULD FOLLOW THE MOST DIRECT PATH TO THE SEWER CONNECTION WITH A MINIMUM OF BENDS AND ELEVATIONS. NO PART OF THE EXHAUST LINE SHOULD BE MORE THAN 3' ABOVE THE LEVEL OF THE WASTE CONNECTION ON THE VACUUM PUMPS.

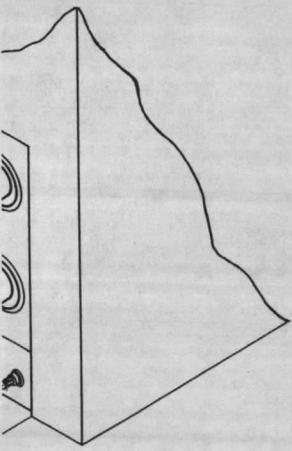


# ION OPTIONS

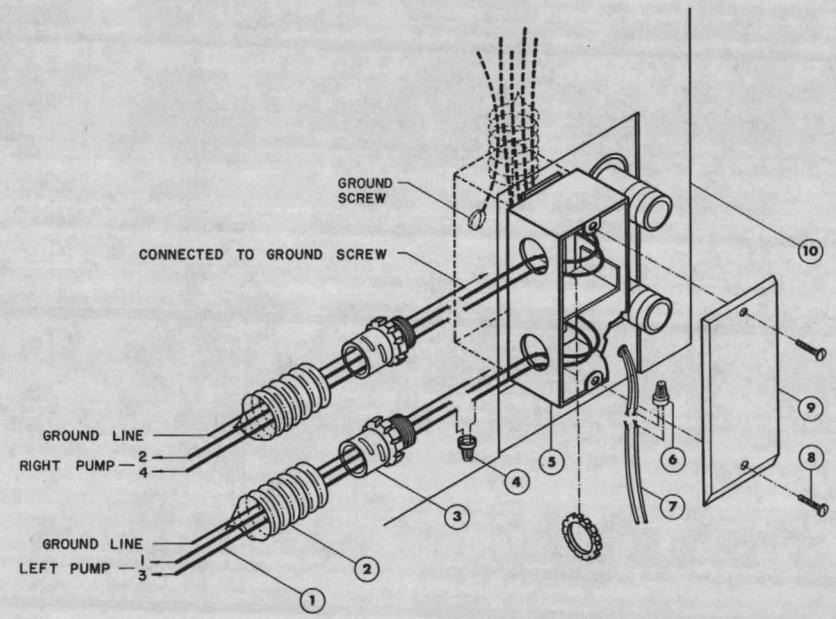
## SYSTEM 1 & 2 HP



### ON ASSEMBLY

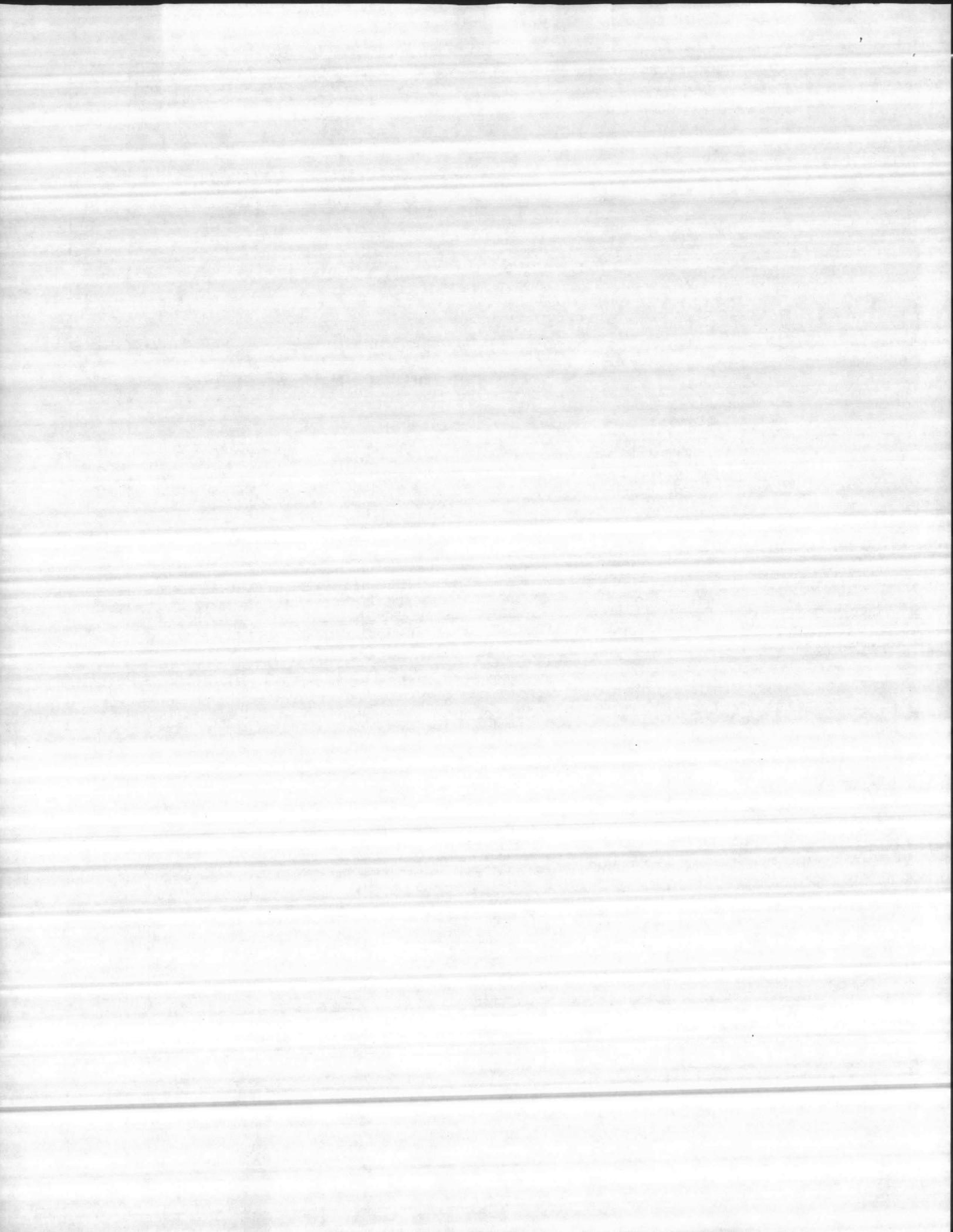


### ELECTRICAL CONNECTION ASSEMBLY



DRAWING NO.	QTY.	PART NO.	DESCRIPTION
1	As Req.	Supplied by Electrician	Power Line, 115/230V
2	As Req.	Supplied by Electrician	Conduit, Flex 1/2"
3	2	Supplied by Electrician	Connector, Conduit, 1/2"
4	4	6-4626-002	Nut, Wire, 73B
5	1	6-4513-008	Box, Elect., 1 1/2" x 2-1/8" x 4" with Divider
6	2	6-4626-004	Nut, Wire, 72B
7	As Req.	Supplied by Electrician	18-2 Wire, Low Voltage
8	2	Furnished with Cover Plate	Screw, Cover Plate
9	1	6-4534-006	Cover Plate, J-Box
10			Dynamic-Dual

DESCRIPTION
Clamp, Stainless Steel
Hose, Red Neoprene, 1" x 6 Ft.
Hose, Spirallock, 1"
Tubing, Nylon, 3/8"
Dynamic-Dual



# SPECIFICATIONS

MOTOR SPECIFICATIONS	MC-201	MC-202
Power Rating	1 HP	2 HP
Running Speed	3450 RPM	3450 RPM
Running Temp	40°C – AMB	40°C – AMB
Voltage	115/230 V.	230 V <i>208</i>
Amps	13.4/6.7	11.7
Cycle	60 Hz.*	60 Hz.*
Phase	Single	Single

\*50 Cycle Motors are Available upon Request

## DIMENSIONS AND WEIGHT

Height	24" Adjustable Legs Extended	24" Adjustable Legs Extended
Width	24"	24"
Depth	15-5/8"	15-5/8"
Shipping Weight	165 Pounds	205 Pounds

## VACUUM SPECIFICATIONS

### ONE PUMP OPERATION

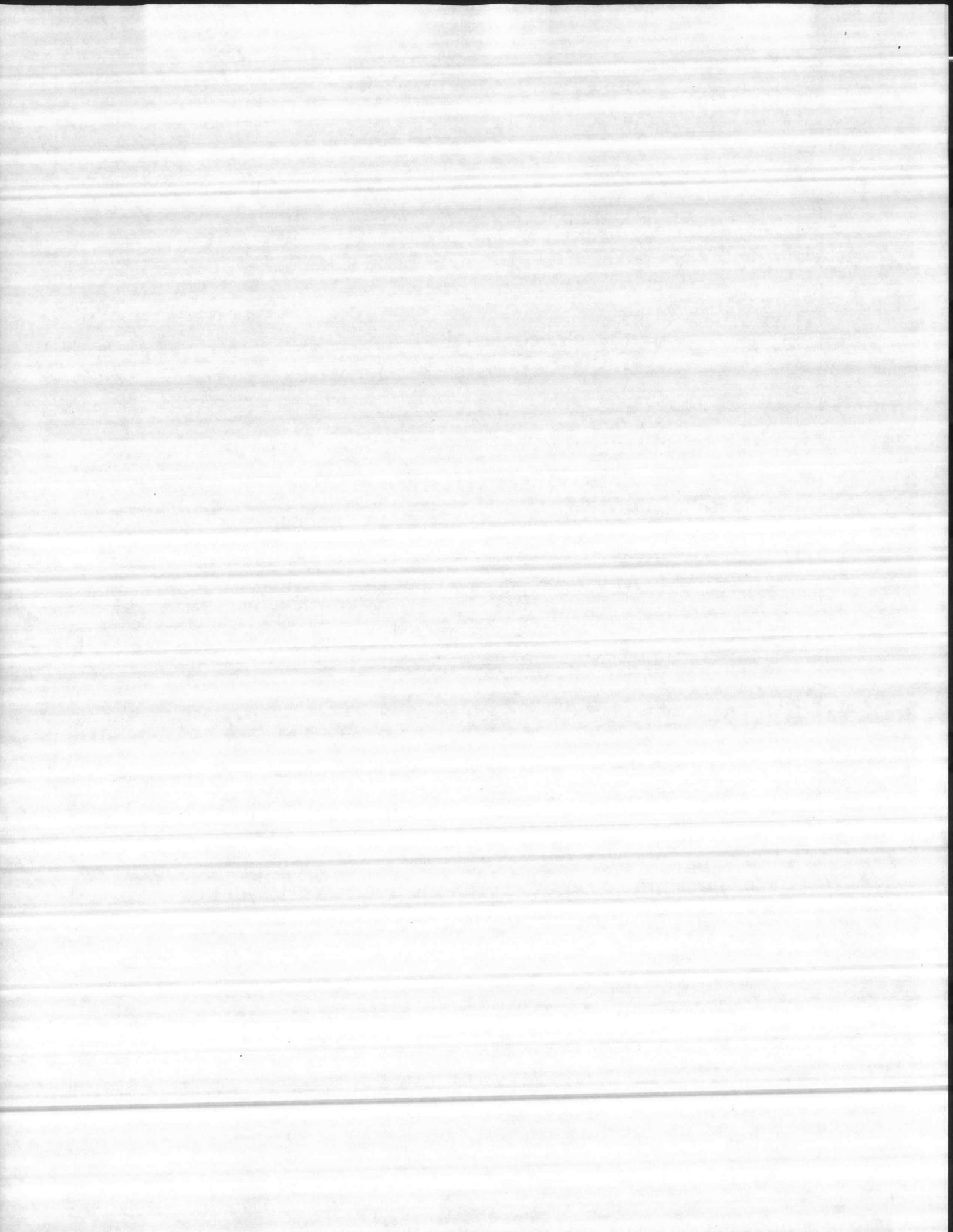
Usable CFM	15 CFM	30 CFM
Mercury Pull (Sealed System)	Approx. 20-25" Hg. Adjustable	Approx. 20-25" Hg. Adjustable
Use Factor (Number of High Volume Hoses and Saliva Ejectors Open Simultaneously)	HV 1 / SE 1	HV 2 / SE 2

## VACUUM SPECIFICATIONS

### TWO PUMP OPERATION

Usable CFM	30 CFM	60 CFM
Mercury Pull (Sealed System)	Approx. 20-25" Hg. Adjustable	Approx. 20-25" Hg. Adjustable
Use Factor (Number of High Volume Hoses and Saliva Ejectors Open Simultaneously)	HV 2 / SE 2	HV 4 / SE 4

- isolators reqd per 8.0.5.4
- 10.1.1.1 PM to each of 9 outlets reqd



# SITE REQUIREMENTS

RECEIVED  
DEC 6

Before the Dynamic-Dual can be properly installed, the following utilities must be supplied:

## ELECTRICAL

All electrical supply lines and control wiring should be supplied and installed by a licensed electrician according to local building codes. The Dynamic-Dual requires two separate circuits (one for each pump motor) of the correct voltage for the system ordered. In addition to the thermal overload protection built into the motors, each circuit must be provided with a circuit breaker, time delay fuse or standard fuse. See the Motor Protection Chart for recommended breaker or fuse amperages.

## LOW VOLTAGE CONTROL LINES

The electrician is to supply and install 18-2 thermostat wire from the pump location to the operatory switches if remote low voltage control is desired.

## WATER

To be installed by plumber according to local building codes. Water line to terminate in 1/2" FIP gate valve.

## WASTE

To be installed by plumber according to local building codes.

OPTION A. Waste line with 1 1/2" FIP Durham "P" trap. Use "P" trap-air gap (Part No. 6-4620-005).

OPTION B. Floor sink. Use floor sink adapter (Part No. 6-4504-022)

## MOTOR PROTECTION CHART

TYPE OF MOTOR PROTECTION	MC-201		MC-202
	115V	230V	230V*
Circuit Breaker	40 Amps	20 Amps	30 Amps
Time Delay Fuse	30 Amps	15 Amps	20 Amps
Standard Fuse	50 Amps	25 Amps	40 Amps

\*All MC-202 Systems are wired at the factory for 230V operation.

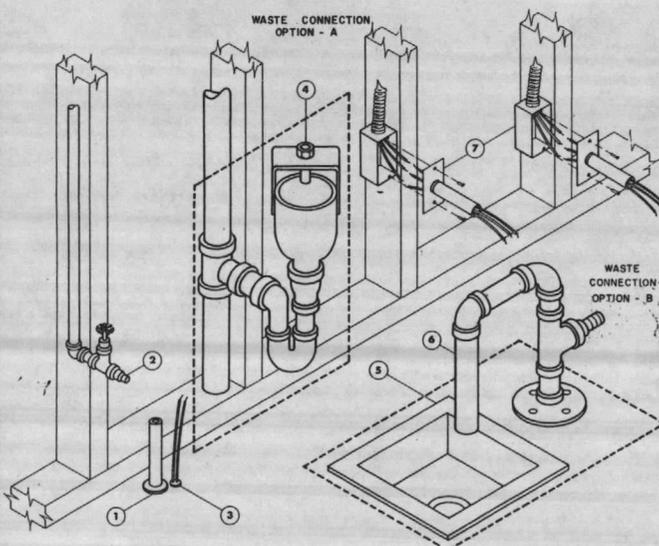
## VACUUM LINES

To be installed by plumber according to local building codes. Vacuum lines and risers to be 1" IPS, PVC, SCH. 40 unless local codes require another material such as copper. All vacuum lines are to slope toward vacuum producer 1" for every 20' run. All connections are to be made with long radius sweep fittings.

All vacuum systems are to be installed according to local building and electrical codes.

An increase transformer (Order No. 200) must be used on all 208V single phase lines when connected to single phase 230V 1 HP or 2 HP Dynamic-Dual units.

## SITE REQUIREMENTS

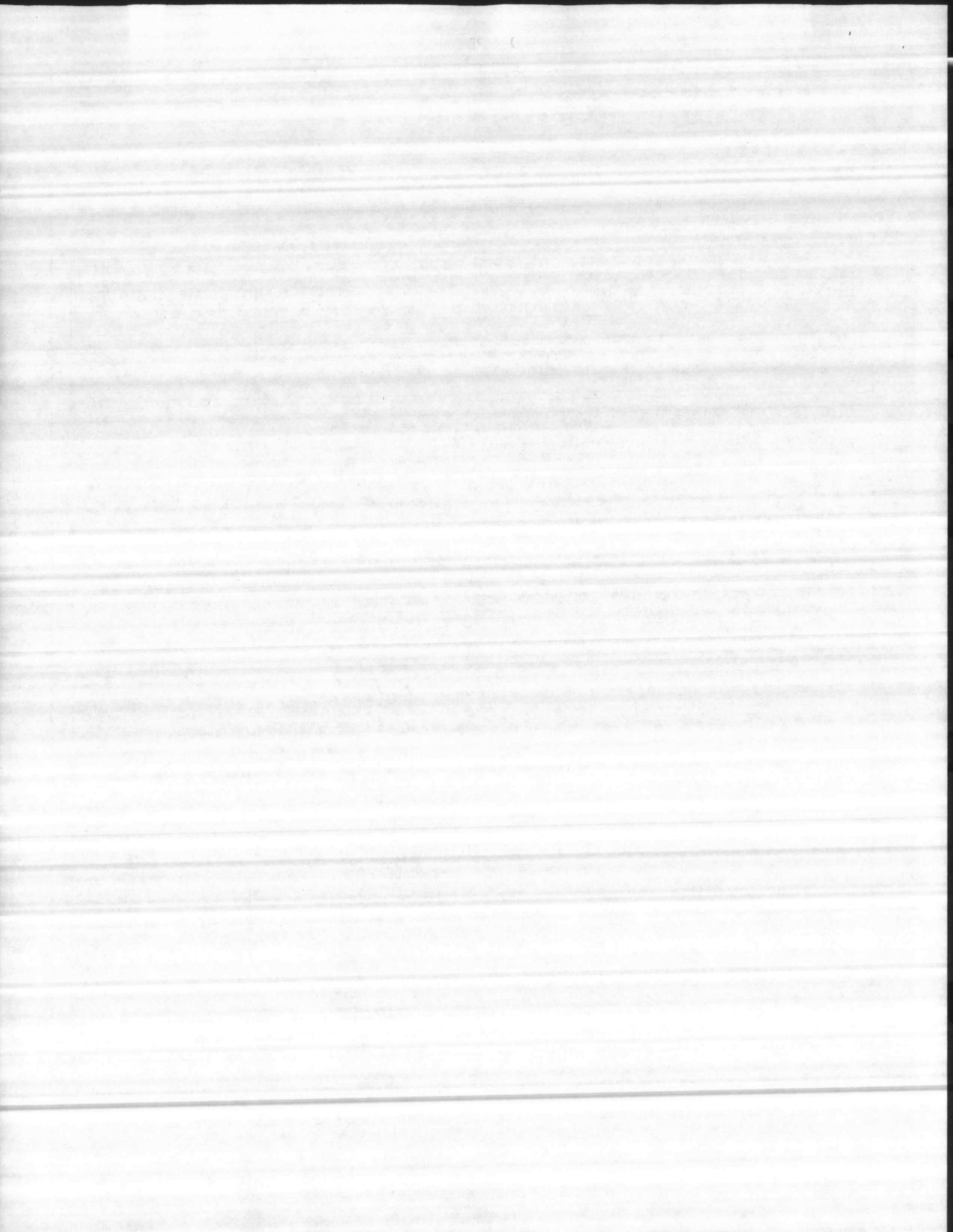


NAVAL FACILITIES ENGINEERING CENTER  
NO. 1000, VIRGINIA 23511

APPROVED  
NOTED AS NOTED  
DATE: 11/27/72  
SUBJECT: 11-77-7526

CONTRACT NO. 11-77-7526 DOES NOT INCLUDE APPROVAL OF ANYTHING FROM THE CONTRACTOR UNLESS THE CONTRACTOR APPROVES AND SUPPORTS THE CONTRACTOR'S RESPONSIBILITY FOR PROVIDING PROPER DIMENSIONS & WEIGHTS OF VACUUM LINES, PVC, SCHEDULE 40 & GATE VALVE REDUCED TO 3/8" FIP

DRWG. NO.	PART NO.	DESCRIPTION
4	6-4620-005	Trap, Air Gap, Reduced to 3/8" FIP
5	-	Floor Sink
6	6-4504-013	Floor Sink Adapter, 1" Barbed Insert
7	-	Two, 115V or 230V Connection Boxes



DRAWING AND SPECIFICATION TRANSMITTAL  
 LOCKWOOD GREENE ENGINEERS, INC.

SPARTANBURG, SOUTH CAROLINA 29304  
 P.O. BOX 491 (803)582-2351

*Spec 11744*  
*#605-1*  
*file 11/27/81*  
*AD*  
*RDC*  
*SC*

TO Naval Facilities  
 Engineering Command-Bldg. N26  
 Atlantic Division  
 Norfolk, Va. 23511

DATE Dec. 24, 1980  
 JOB NO. 77239.16  
 JOB NAME N.R.M.C.

TRANSMITTAL NO. 4074  
 SHEET 1 OF 1  
 ORDER NO.

ATTN: Mr. John Grubbs - Code 5

Cont. # N-62470-77-C-7526

WE ARE SENDING YOU THE FOLLOWING DATA XX HEREWITH \_\_\_\_\_ UNDER SEPARATE COVER

QUAN.	DOCUMENT NO.	REV. NO.	DESCRIPTION	VENDOR	COI
1	Transmittal		Dated 11/26/80	Erwin Jones Co.	D
1	Letter		Of Certification	Dentol Mfg. Co.	D
1			Data Sheets	" " "	D
1			Install. Instructions	" " "	D



CODE FOR

LOCKWOOD GREENE DOCUMENTS

- A - INFORMATION
- B - REVIEW
- C - APPROVAL
- D - REVISED DWG. (SEE REVISION)

- E - BID
- F - CONSTRUCTION
- G - PURCHASING
- H -

VENDOR DOCUMENTS

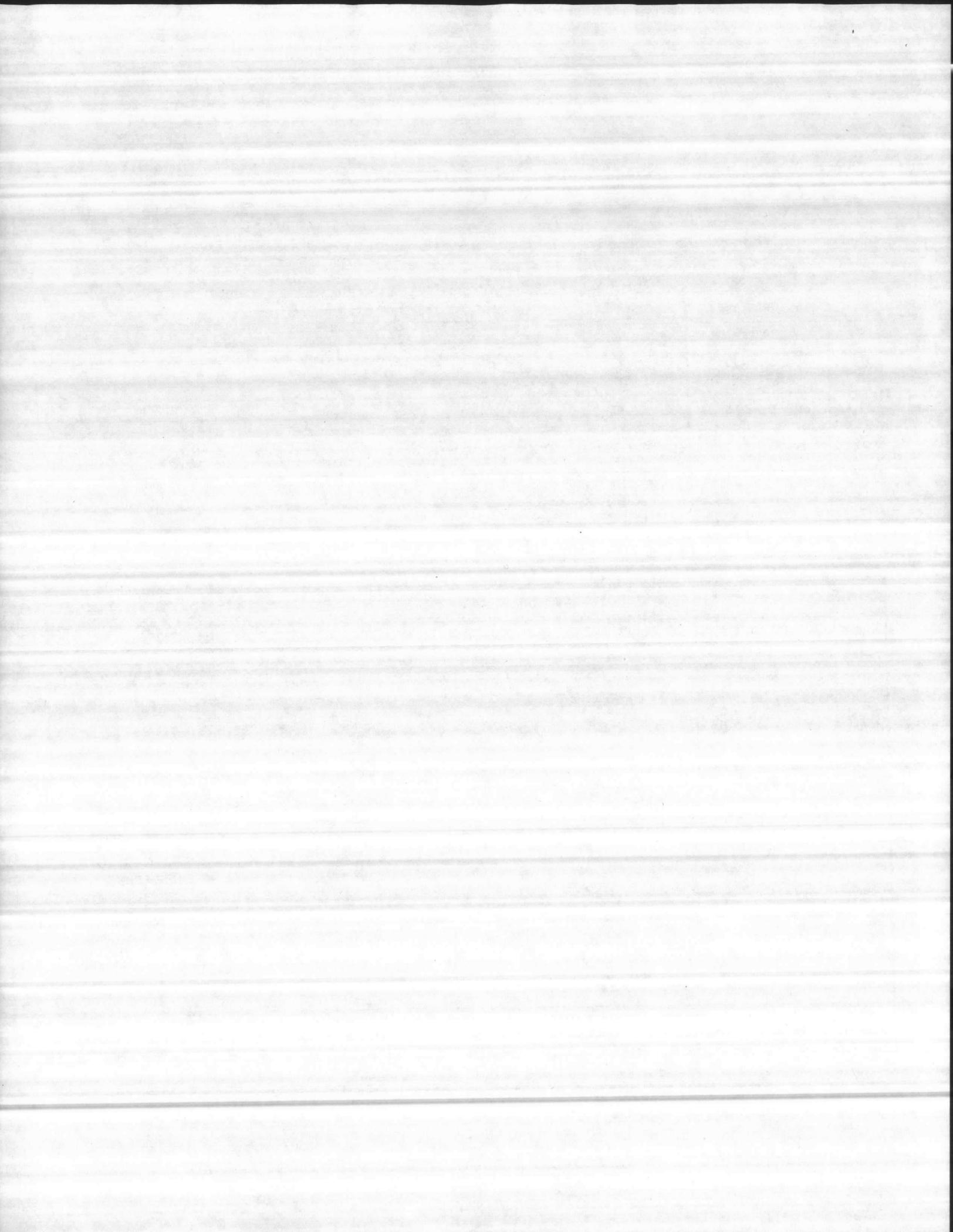
- K - NO CORRECTIONS NOTED
- L - MAKE CORRECTIONS NOTED
- M - REVISE AND RESUBMIT
- N - REJECTED (SEE REMARKS)

COPIES TO			QUAN	TRANS ONLY	CODE	COPIES TO			QUAN	TRANS ONLY	CODE
ROICC			2								
Cardinal Contracting Co.			3								

REMARKS

PLEASE ACKNOWLEDGE RECEIPT BY IMMEDIATE RETURN OF SIGNED COPY OF THIS TRANSMITTAL

RECEIVED BY \_\_\_\_\_ DATE \_\_\_\_\_ TRANSMITTED BY Richard McKnight



**CONTRACTOR'S SUBMITTAL TRANSMITTAL**

5ND LANTDIV 4-4355/3 (Rev 6/76)

SECTION 11744

CONTRACT NO. 62470-77-C-7520  
 TRANSMITTAL NO. 605-1  
 DATE 12-4-80

FROM CONTRACTOR  
 Cardinal Contr. Co.  
 TO  
 Lockwood Greene Engrs

PROJECT TITLE AND LOCATION  
 NAVAL REGIONAL MED. CTR.  
 Camp Lejeune, N.C.

**CONTRACTOR USE ONLY**

**REVIEWER USE ONLY**

\*List only one specification division per form.

\*\*ACTION CODES

List only one of the following categories on each transmittal form, and indicate which is being submitted

- A-Approved
- D-Disapproved
- AN-Approved as noted
- RA-Receipt acknowledged.
- C-Comments
- R-Resubmit

Contractor Approved

OICC Approval

Deviation/Substitution For OICC Approval

ITEM NO.	PROJ. SPEC. SECT. & PARA. and/or PROJ. DWG. NO. *	ITEM IDENTIFICATION (Type, size, model no., Mfg. name, dwg. or brochure number)	NO. OF COPIES	ACTION CODES **	REVIEWER'S INITIALS CODE AND DATE
605-1	8.5	Erwin Jones Co. Trans. Letter	7		
		Den Tal Ez Mfg. Co. Letter of Certif.	7		
		" " " " Data Sheets (2)	7		
		" " " " Install. Instruct	7		

**CONTRACTOR'S COMMENTS**

This Submittal is Regarding Navy's RFP-85 P-106

**COPY OF TRANSMITTAL AND SUBMITTALS TO ROICC**

**CONTRACTOR REPRESENTATIVE (Signature)**

12-4-80

W.M.J. Haymaker

**DATE RECEIVED BY REVIEWER**

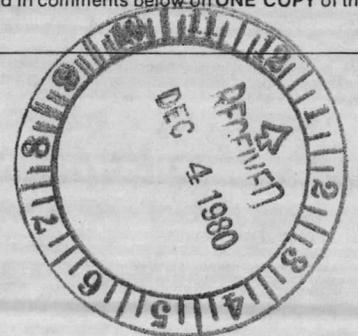
**FROM (Reviewer)**

Submittals are returned with action indicated. Approval of an item does not include approval of any deviation from the contract requirements unless the contractor calls attention to and supports the deviation.

Submittals are forwarded to LANTDIV with A-E recommendations indicated in REVIEWER USE ONLY Section and in comments below on ONE COPY of the transmittal form.

**REVIEWER'S COMMENTS**

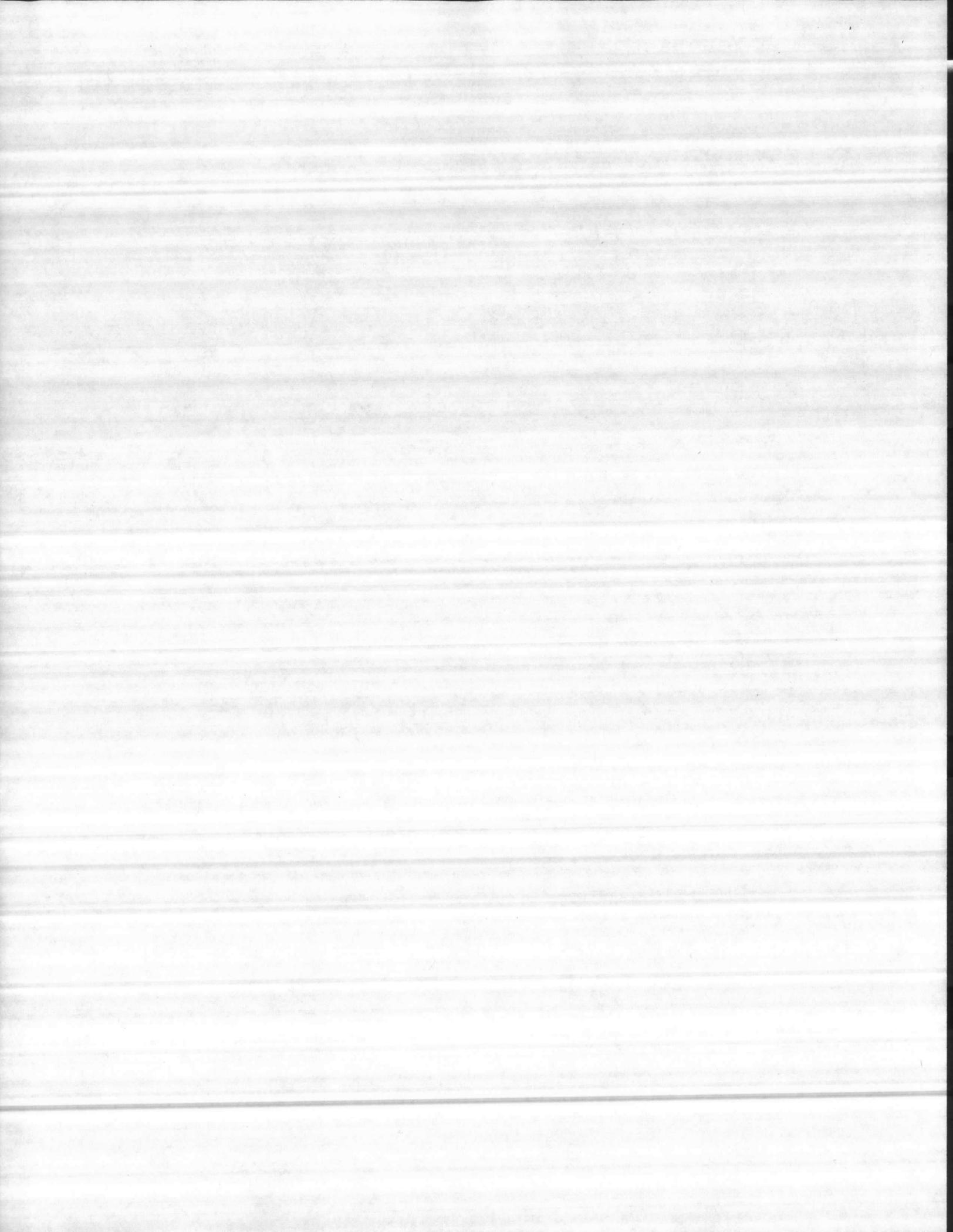
Who is Provincial  
 Boost TRANSFERACK ?  
 RFP SPECS Require 200V.



COPIES TO  
 ROICC (2)  
 LANTDIV (1)  
 A-E (1)

DATE

SIGNATURE



**CONTRACTOR'S SUBMITTAL TRANSMITTAL**  
 5ND LANTDIV 4-4355/3 (Rev. 6/76)

SECTION 11744

CONTRACT NO. 62470-77-C-7526  
 TRANSMITTAL NO. 605-1  
 DATE 12-4-80

FROM CONTRACTOR  
 Cardinal Contr. Co.  
 TO  
 Lockwood Greene, Engrs

PROJECT TITLE AND LOCATION  
 NAVAL REGIONAL MED. CTR.  
 Camp Lejeune, N.C.

**CONTRACTOR USE ONLY**  
 \*List only one specification division per form.

List only one of the following categories on each transmittal form, and indicate which is being submitted

Contractor Approved

OICC Approval

Deviation/Substitution For OICC Approval

**REVIEWER USE ONLY**  
 \*\*ACTION CODES  
 A-Approved  
 D-Disapproved  
 AN-Approved as noted  
 RA-Receipt acknowledged.  
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 R-Resubmit

ITEM NO.	PROJ. SPEC. SECT. & PARA. and/or PROJ. DWG. NO. *	ITEM IDENTIFICATION (Type, size, model no., Mfg. name, dwg. or brochure number)	NO. OF COPIES	ACTION CODES **	REVIEWER'S INITIALS CODE AND DATE
605-1	8.5	Erwin Jones Co. Trans. Letter 11/26/80	7	D	WJR 12/19/80
		Den Tal Ez Mfg. Co. Letter of Certif.	7		
		" " " " Data Sheets (2)	7		
		" " " " Install. Instruct	7		

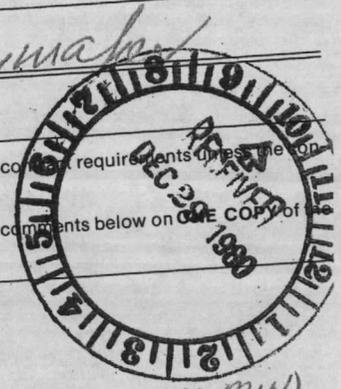
CONTRACTOR'S COMMENTS  
 " This Submittal is Regarding Navy's RFP-85 P-106

COPY OF TRANSMITTAL AND SUBMITTALS TO ROICC 12-4-80  
 CONTRACTOR REPRESENTATIVE (Signature) Wm. J. Hayman

DATE RECEIVED BY REVIEWER FROM (Reviewer)

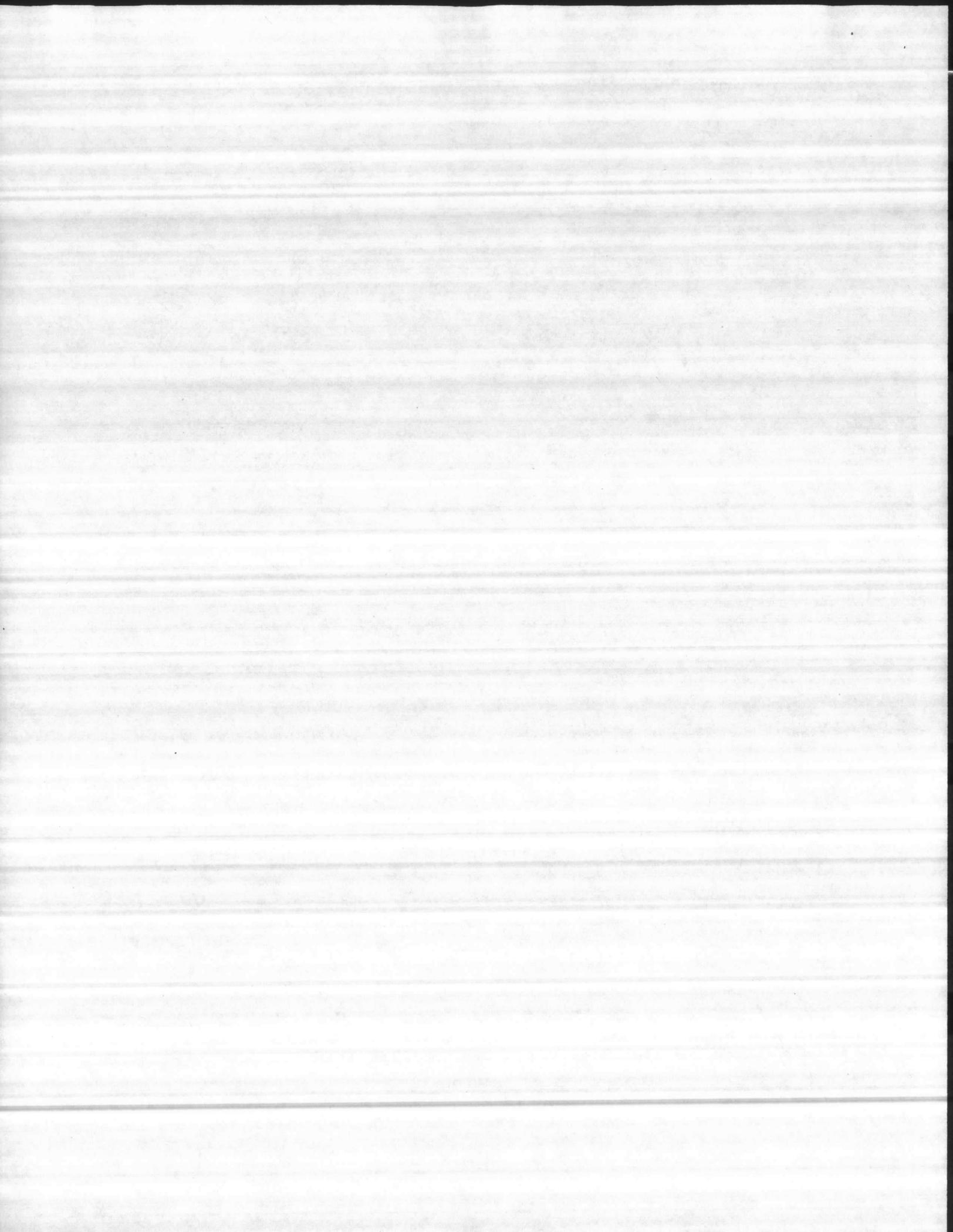
- Submittals are returned with action indicated. Approval of an item does not include approval of any deviation from the contract requirements unless the contractor calls attention to and supports the deviation.
- Submittals are forwarded to LANTDIV with A-E recommendations indicated in REVIEWER USE ONLY Section and in comments below on ONE COPY of transmittal form.

REVIEWER'S COMMENTS  
 1. PROVIDE ISOLATORS PER PAR 8.5.3 & 8.5.4  
 2. 10-12 CFM TO EACH OF 9 OUTLETS REQ'D (TOTAL OF 90 CFM, MIN)



COPIES TO: ROICC (2), LANTDIV (1), A-E (1)  
 DATE 12/19/80  
 SIGNATURE [Signature]

4074



ERWIN JONES & CO., INC.  
P. O. BOX 240160 - 116 SOUTHSIDE DRIVE  
CHARLOTTE, N. C. 28224  
(PHONE: (704) 525-7630)



FILE NO. Lockwood Greene Engineers, Inc.  
RECEIVED DATE: 11/26/80  
DEC 8 1980  
REF TO ACK  
TRANSMITTAL OF SHOP DRAWINGS:  
205 BED NAVAL HOSPITAL  
NAVAL REGIONAL MEDIC  
CENTER  
CAMP LEJUNE, NC

CARDINAL CONTRACTING CO.  
PO BOX 8408  
CAMP LEJUNE NC

WE ARE FORWARDING SHOP DRAWINGS  
IN NINE SETS.  
(1)  ENCLOSED.  
(2)  UNDER SEPARATE COVER.

DENTAL ORAL EVACUATION  
EQUIPMENT BY:  
DENTAL-EZ MFG. CO  
ANAHEIM, CALI.  
ITEM D-9300

FOR DISPOSITION AS NOTED BELOW:

- (3)  FOR APPROVAL.
- (4)  APPROVED AS NOTED.
- (5)  APPROVED AS NOTED WITH CORRECTIONS.
- (6)  REVISED SHOP DRAWINGS FOR RECORD.
- (7)  REVISED SHOP DRAWINGS FOR FINAL RECORD.
- (8)  RE-DRAW AND RE-SUBMIT FOR FINAL APPROVAL.
- (9)  RE-DRAW AND RE-SUBMIT FOR RECORD.
- (10)  OBTAIN APPROVAL OF DRAWINGS. RETURN ONE SET MARKED "APPROVED" OR "REVISED" FOR OUR RECORD.
- (11)  HAVE DRAWINGS CHECKED VERY CAREFULLY FOR DESIGN, OVERALL DIMENSIONS AND LOCATIONS OF SERVICE FIXTURES AND TO SEE THAT WE HAVE INTERPRETED ALL REVISIONS CORRECTLY.
- (12)  IF ANY FURTHER CHANGES SHOULD BE REQUIRED, ADVISE IMMEDIATELY AS WE ARE PROCESSING SAME FOR PRODUCTION.
- (13)  SEE ATTACHED A COPY OF THE FACTORY'S LETTER OF INSTRUCTION TO US EMPHASIZED AND SECURE ALL ANSWERS REQUIRED.
- (14)  PLEASE RETURN SIGNED APPROVED FURNITURE FINISH SAMPLE OR GIVE NUMBER AND COLOR OF REQUIRED FINISH. WE CANNOT PRODUCE UNLESS WE HAVE THIS INFORMATION.
- (15)  ADVISE YOUR LATEST DELIVERY REQUIREMENT. THIS IS IMPORTANT!
- (16)  PROCEED WITH PRODUCTION. ADVISE YOUR EXPECTED DELIVERY DATE.
- (17)  PLEASE READ THE ENCLOSED VERIFAXED LETTER.

VERY TRULY YOURS,  
*Erwin Jones, Pres.*  
ERWIN JONES & CO., INC.

4074

EJ/F (10-80)

NOTE: THIS DENTAL EQUIPMENT REQUIRED PER SECTION 11744 (DENTAL EQUIPMENT), PARAGRAPH 8.5 (ITEM D-9300, SYSTEM ORD. EVAC.)

(OVER)



PAGE TWO - CAMP LEJUNE

AS REVISED PER NAVY LETTER P-106,  
REF #85 OF APRIL 30, 1980. TO CARDINAL  
CONTRACTING CO, INC SIGNED BY R.D.  
COLEY, ASSISTANT RESIDENT OFFICER  
IN CHARGE OF CONSTRUCTION

INCLUDED IN NINE COPIES EACH ARE:

1. CERTIFICATION OF EQUALITY TO SPECIFICATIONS BY MANUFACTURER (DENTAL EZ CUSTOM VACUUM);
2. "INSTALLATION INFORMATION"
3. DETAILS ON CONTROL PANEL

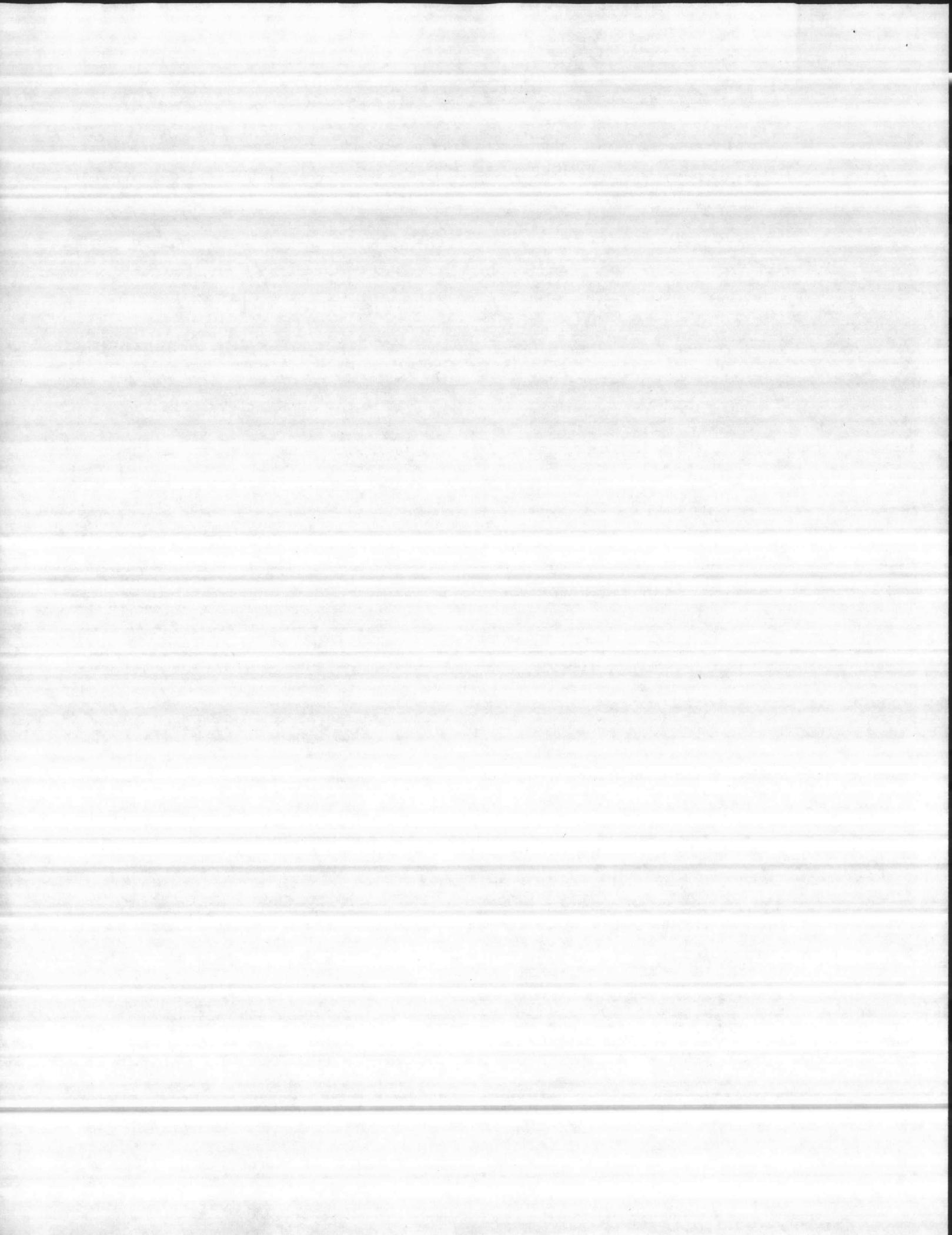
ABOVE ARE SUBMITTED FOR APPROVAL IN NINE COPIES

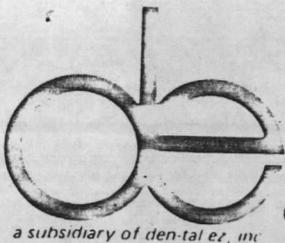
SYSTEM OFFERED ! CONSISTS OF FURNISHING TWO MC-202 AND CONTROL PANEL.

INCLUDED IN TWO COPIES ARE "INSTALLATION & SERVICE MANUAL" WHICH ARE SUBMITTED TO COMPLY WITH YOUR LETTER OF NOV. 10, 1980 ABOUT SPECIFICATION SECTION 11700 (GENERAL REQUIREMENTS FOR MEDICAL EQUIPMENT), PARA. 5.2.1 THRU 5.2.3. WE WILL ATTACH COPIES OF THIS TO EACH OF THE MC-202 EVACUATOR UNITS IN THEIR PACKING CRATES

PIPING, WIRING, CONDUIT, ELECTRIC, CONNECTING, ARE BY OTHERS

SYSTEM CONSISTS OF





den·tal·ez mfg. co.  
custom vacuum division

a subsidiary of den-tal ez, inc

1841 S. STATE COLLEGE BLVD. • ANAHEIM, CA 92806  
TELEPHONE: AREA CODE 714/634-1211

REF: 205 BED NAVAL HOSPITAL H  
NAVAL REGIONAL MEDICAL CENTER  
MARINE CORPS BASE  
CAMP LEJEUNE, NORTH CAROLINA

TO WHOM IT MAY CONCERN:

I, HEREBY, CERTIFY, THAT ALL MATERIALS AND CONSTRUCTION FOR ITEM D-9300 MEET THE MINIMUM REQUIREMENTS OF SECTION 11744 DENTAL EQUIPMENT. (PARAGRAPH 8.5.1 through 8.5.6 INCLUSIVE).

IT SHOULD BE NOTED THAT THE EQUIPMENT SPECIFICATION WERE REVISED PER DEPARTMENT OF THE NAVY LETTER, P-106, RFP # 85, OF 30 APRIL 1980, TO CARDINAL CONTRACTING CO., INC., SIGNED BY R. D. COLEY, ASSISTANT RESIDENT OFFICER IN CHARGE OF CONSTRUCTION.

IT SHOULD FURTHER BE NOTED THAT THE EQUIPMENT IS DESIGNED TO OPERATE ON 230 VOLTS AND IF SUCH POWER IS AVAILABLE THAT OPERATION ON THIS POWER IS ADVISED. THE EQUIPMENT IS, HOWEVER, MODIFIED WITH ADDITION OF BOOST TRANSFORMERS TO MEET SPECIFICATIONS STATED IN 8.5.2. IF IN FACT 230 VOLTAGE IS AVAILABLE THEN THE BOOST TRANSFORMERS CAN BE DELETED FROM THE INSTALLATION SITE.

IT SHOULD BE NOTED THAT ITEM D-9300 IS THE VACUUM PRODUCING EQUIPMENT ONLY AND THE ELECTRICAL SOURCE, VACUUM LINES, WATER SOURCE, DRAIN LINES, AND LOW VOLTAGE CONTROL LINES ARE TO BE SUPPLIED BY OTHERS (SEE INSTALLATION INFORMATION).

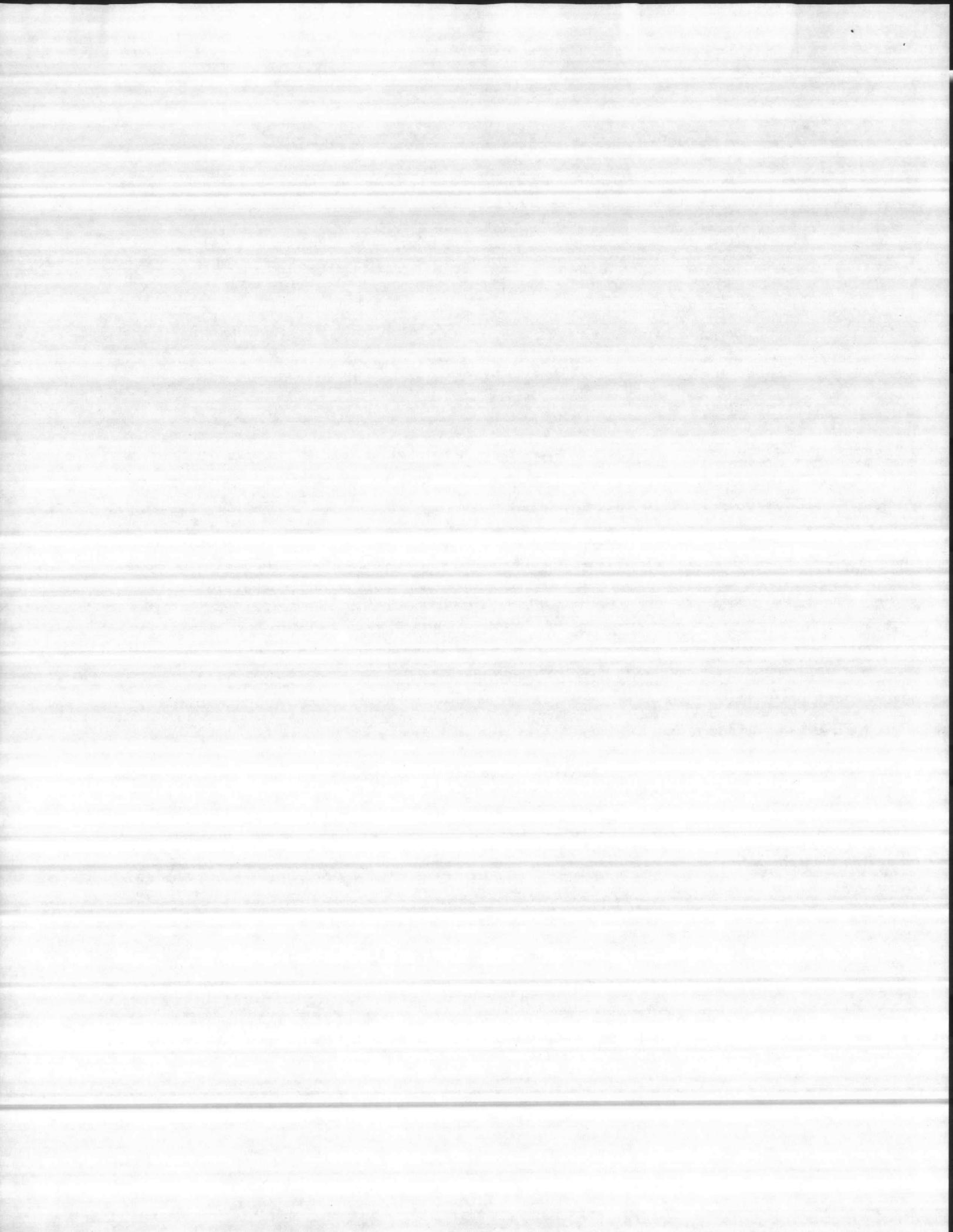
THE CONTROL PANEL, PARAGRAPH 8.5.5, CAN BE LOCATED AT THE DISCRETION OF THE DENTAL PERSONNEL AT ANY CONVENIENT LOCATION WITHIN REASONABLE ACCESS TO THE DENTAL SUITES. IT WILL THEREFORE ALLOW CONTROL OF ALL MOTORS AND MONITORING OF AVAILABLE SUCTION FROM A LOCATION REMOTELY REMOVED FROM THE EQUIPMENT ITSELF.

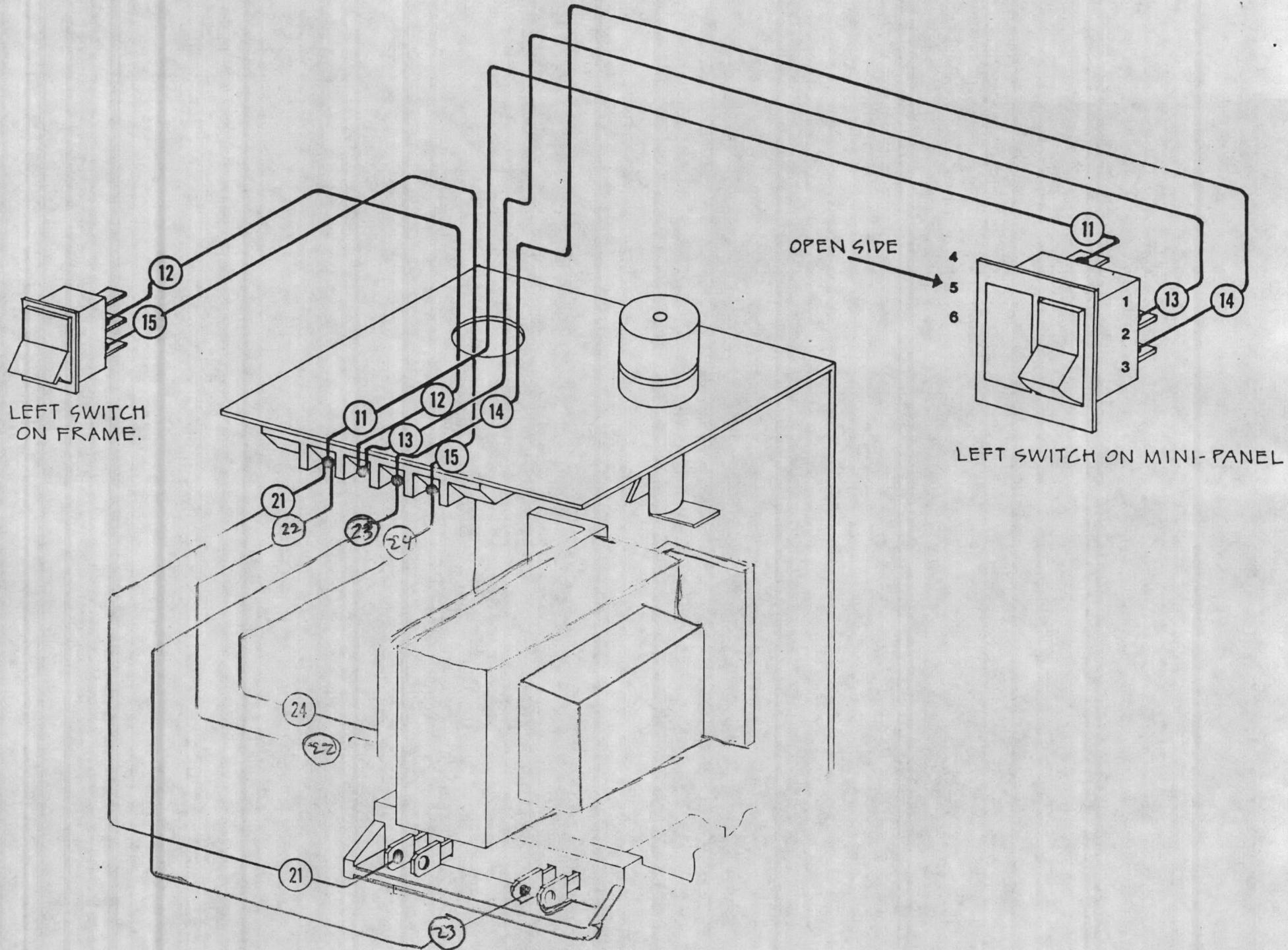
STEVEN G. STILLINGS -

TERRITORY MANAGER  
DEN TAL EZ CUSTOM VACUUM

The Pacesetter in Modern Dentistry

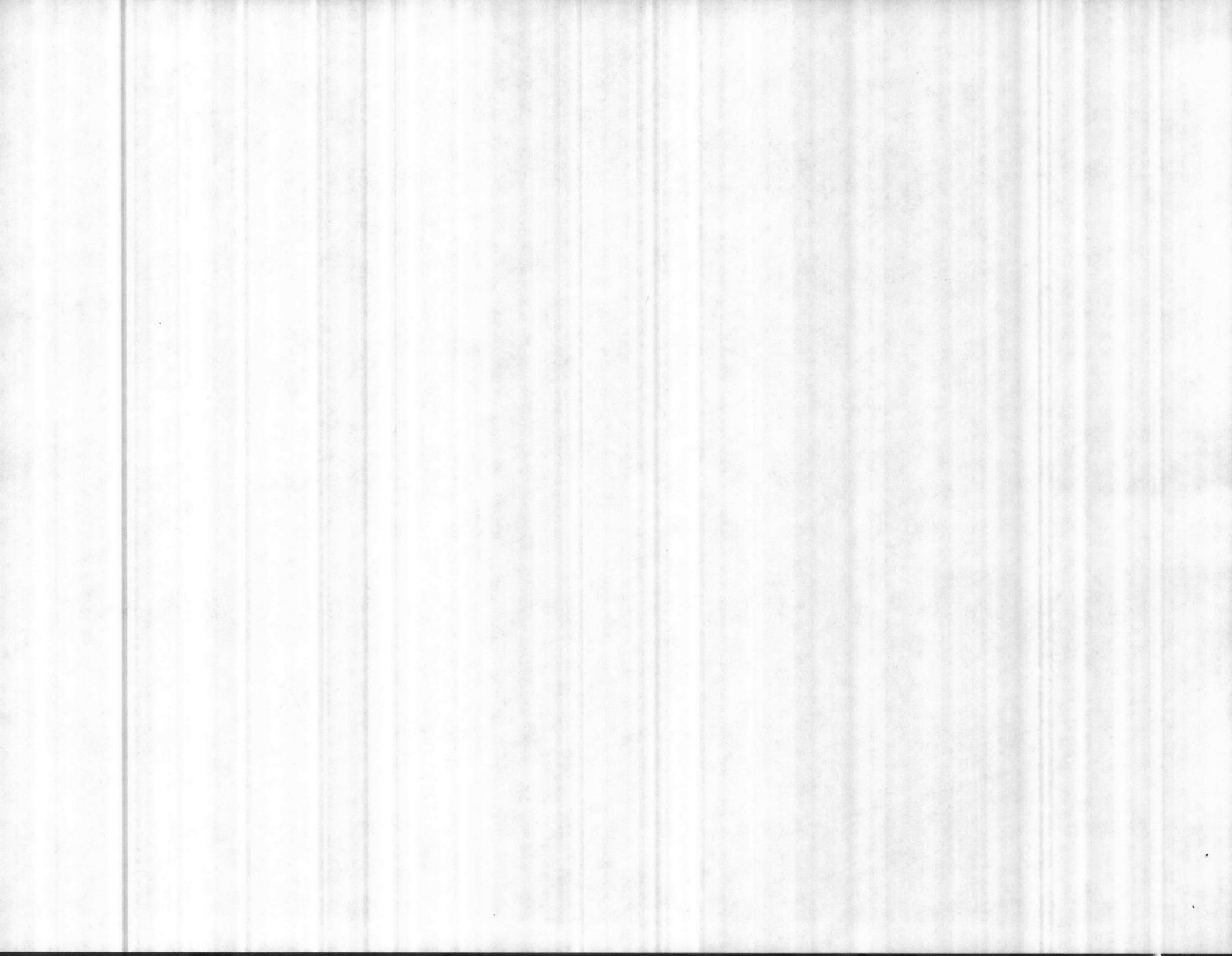




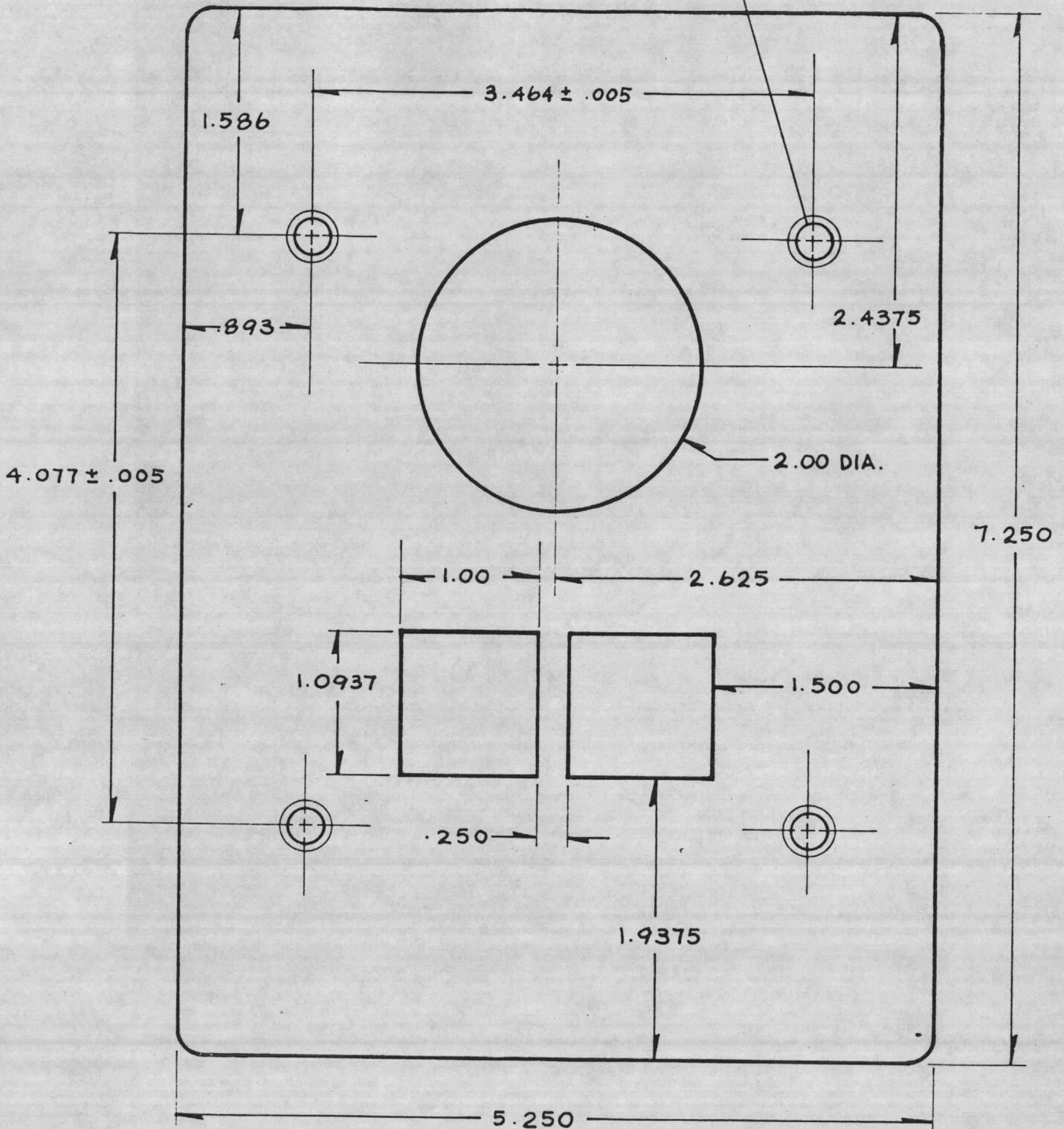


LEFT SWITCH ON FRAME.

LEFT SWITCH ON MINI-PANEL



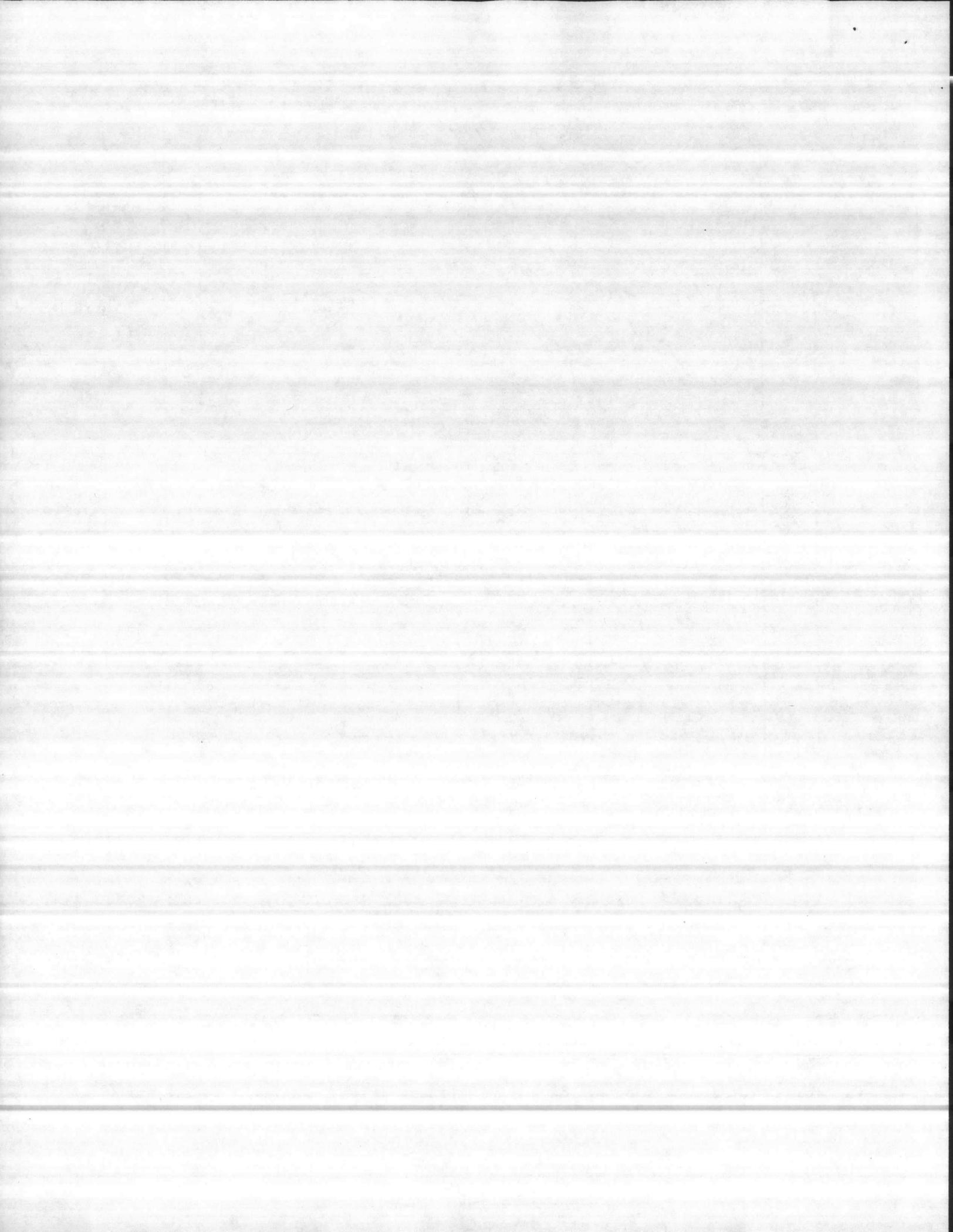
.250 DRILL  
COUNTERSINK FOR NO. 12 SCREW



DEN-TAL-EZ, CUSTOM VACUUM DIV.  
VAC-MASTER, DUAL PANEL.

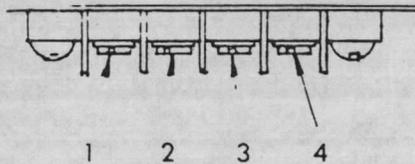
DATE: 10.10.77  
DR. BY: U. BUI  
FULL SCALE.

MATERIAL: TYPE 5052, THICKNESS .090, HARDNESS H32 6-4652-004

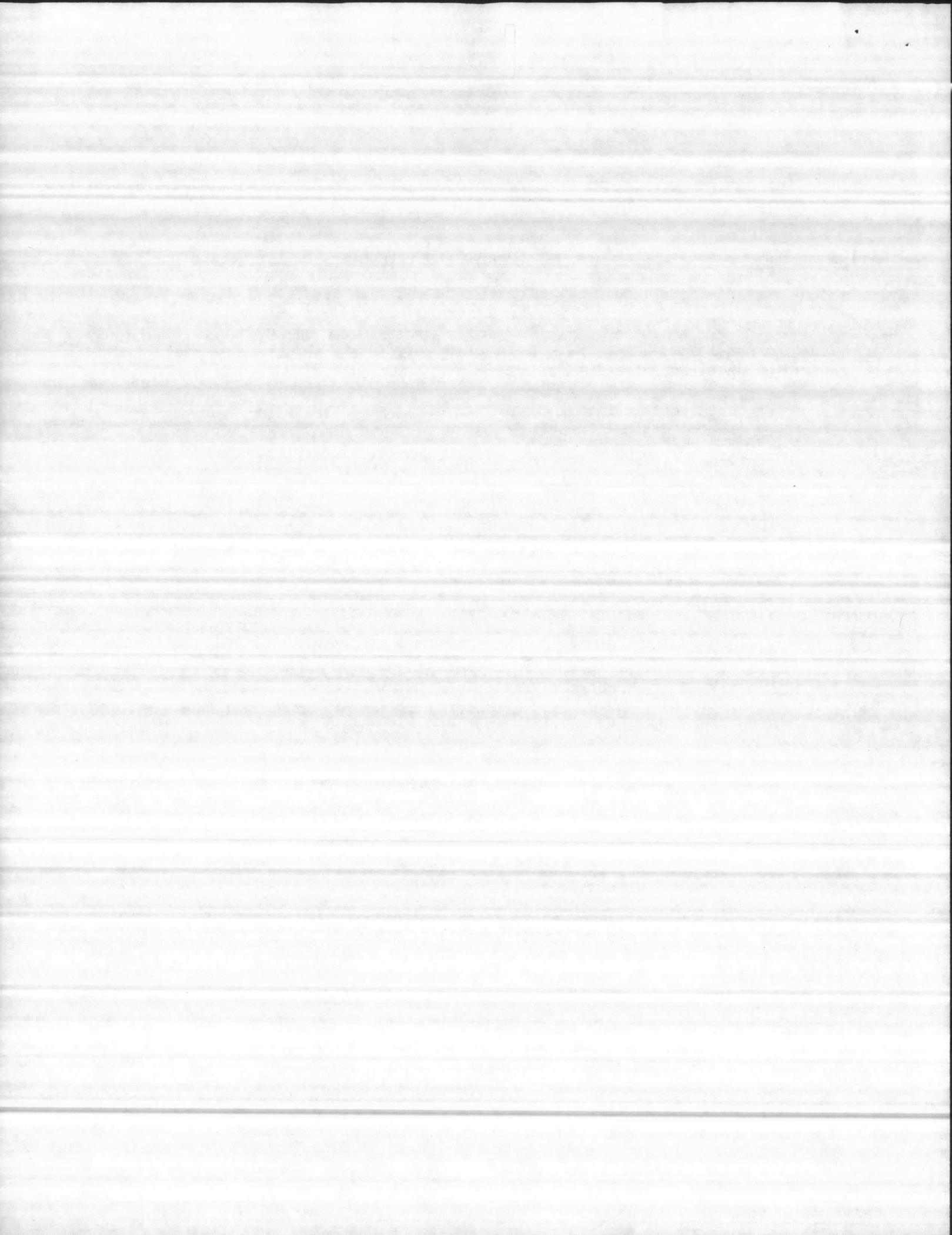


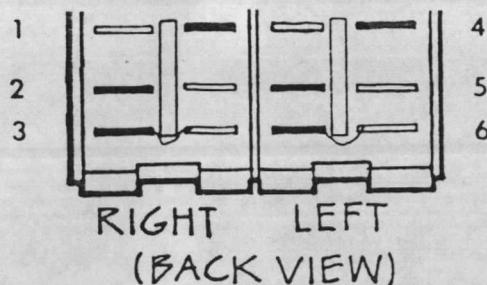
INSTALLATION INSTRUCTIONS  
FOR  
MINI PANEL WITH 2 SWITCHES AND GAUGE

- (1) TURN OFF ALL ELECTRICAL POWER TO THE VACUUM PUMP.
- (2) Install the mini-panel 4x3x6 box at the desired location.
- (5) Locate a place on the vacuum line to tap vacuum system for vacuum gauge.
- (4) Install the 1/8 inch elbow adaptor supplied with kit in the vacuum lines.
- (5) Run the nylon tubing supplied with the kit from the vacuum line tap to the mini-panel box, and leave 8 inches of slack in the box. Insert the hose into the elbow fully. Refrain from over tightening the compression nut.
- (6) After being certain that the power is off, remove the vacuum pump covers, loosen the electrical control boxes screws, and remove their covers.
- (7) Remove the black strain reliefs from the electrical control box tops, leave the black wires intact.



- (8) Note the terminal numbers in the drawing above. Loosen screws on all the terminals for both pumps. On both terminal strips, move the black wire on terminal 3 to terminal 2.
- (9) Run the control wire from the mini-panel box to the inside of the pump. Leave about 1 foot of slack at the box and 4 feet inside the pump. The mini-panel system requires 18 gauge minimum, six conductor wire, or 2 runs of 5 conductor wire.
- (10) At the mini-panel site, strip at least 3 inches of outer insulation from the control wires, and  $\frac{1}{4}$  inch off each wire end.
- (11) To each of these stripped ends, crimp or solder on the six connectors supplied in the kit.





- (12) Push the 6 connectors onto the tabs located on the back of the switches. Make a list of wire colors and terminal numbers. Connect the vacuum line to the gauge, be careful to insert the hose fully. Refrain from over tightening the nut.
- (13) At the pump, strip the outer insulation back about 2 feet, and make bundles of 3 wires, a left pump bundle and right bundle. Run these wires through the control box holes along with the already existing black wires. Strip all six wires about  $\frac{1}{2}$  inch each.
- (14) By using your terminal number color list, wire as follows:

Left Pump Term. No.	Left Panel Switch No.	Right Pump Term. No.	Right Panel Switch No.
1	4	1	1
2	5	2	2
5	6	3	3
4	-	4	-

- (15) Replace the panel on to the panel box with the 4 screws. Replace the pump electrical box covers and tighten screws. Be careful not to pinch or contact any wires when replacing the covers. Turn all switches on pump and panel to off (down).
- (16) Restore the power to the pump, turn the pump switches on. If all is well the pump will not run. Turn on the mini-panel switches. The pump should run with vacuum showing on the gauge, and the indicator lights should illuminate. Should a problem develop, FIRST TURN OFF THE POWER AT POWER PANEL. THEN CHECK ALL WIRING, THEN THE FUSES. IF A FUSE IS BLOWN REPLACE FUSES WITH ONLY THE TYPE RECOMMENDED ON THE PUMP. ANY FUSE OTHER THAN THE RECOMMENDED SIZE AND TYPE MAY NOT OPERATE THE TRANSFORMER AT ALL OR CREATE A POTENTIAL FIRE HAZARD.

